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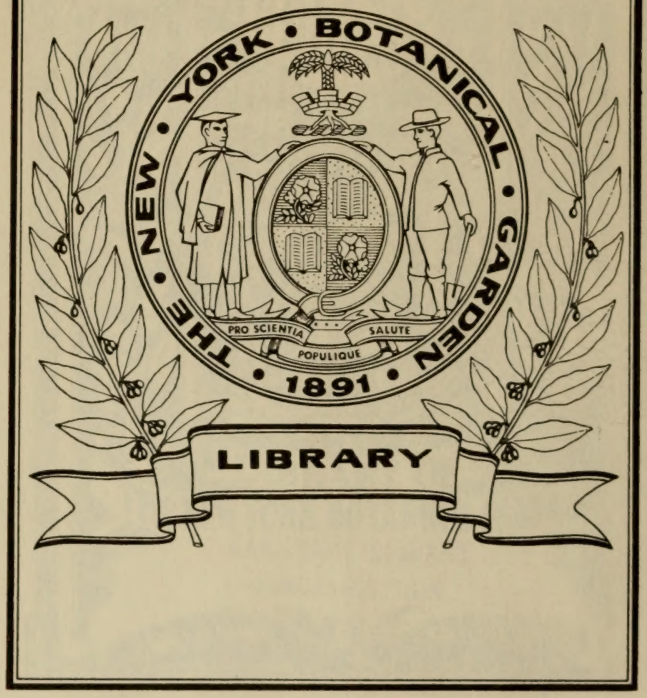

ERRATA.

Page 6—*For* Nasturtium Sylvestre, *read* Nasturtium sylvestre.
Page 7—*For* Brassica sinapistrum, *read* Brassica Sinapistrum.
Page 7—*For* Lepidium Ruderale, *read* Lepidium *ruderale.*
Page 14—*For* Geranium pucillum, *read* Geranium pusillum.
Pape 15—*For* Vitis labrusca, *read* Vitis Labrusca.
Page 18—*For* Lespedeza capitata, var. Angustifolia, *read* var. angustifolia.
Page 38—*For* Epigaæ, *read* Epigæa.
Page 45—*For* Thymus serpyllum, *read* Thymus Serpyllum.
Page 51—*For* Atriplex patula var. literalis, *read* var. litoralis.
Page 53—*For* the word Camden, 8th line from top, *read* Phillipsburg.
Page 58—*For* Juniperus communis var. Alpina, *read* var. alpina.
Page 66—*For* Juncus coarctatus, *read* Juncus Canadensis, Gay, *var.* coarctatus, Engl.
Page 75—*For* Bromus sterillis, *read* Bromus steri*l*is.
Page 80—*For* Lycopodium complanatum, var. Sabinæfolium, *read* var. sabinætolium.

Page 7—(adv. Eu.) should have been printed after DRABA *verna.*
Page 47—(adv. Eu.) should have been printed after Myosotis, *arvensis.*
Page 57—(adv. Eu.) should have been printed after SALIX *fragilis* and SALIX *alba.*

ADDENDA.

LOBELIA, L.
L., Kalmii, L. Sussex Co. (*Porter.*)

ERYTHRÆA, Pers.
E. ramosissima, Pers.
Var. pulchella, Griseb. (*Porter.*)

CAREX, L.
C. nigromarginata, Schw. Banks of the Delaware above Milford. (*Porter.*)

☞ The author will be thankful to have his attention drawn to errors and omissions.

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1877

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BOTANICAL
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PREFACE TO FIRST EDITION.

THE following Catalogue was undertaken because I believed that a record of the names, and a description of the localities of the plants growing without cultivation in the State of New Jersey, would be a useful book to students of Botany, as well as to Botanists and collectors of Plants all over the country.

Having collected largely, and examined with great care, the Flora of the State, I began to prepare materials for a catalogue, and communicated my design to the late Dr. Torrey, who encouraged me to go forward, giving me a list of plants which he knew to be indigenous, and furnishing me with other important information.

The late Dr. P. D. Knieskern made a careful examination of the eastern parts of the counties of Monmouth, Ocean, and Burlington; and furnished me with many of the interesting plants found in the pine regions. He made a specialty of the Cyperaceæ and Gramineæ, and many of the members of these orders are introduced on his authority.

I am also indebted to Prof. Geo. H. Cook, Vice President of Rutgers College, Wm. M. Canby, of Wilmington, Delaware, and Prof. Porter, of Lafayette College.

Prof. Samuel Lockwood, of Freehold, furnished me with plants growing on the shores of New York Bay in the vicinity of Key-port.

I am under special obligations to Rev. Dr. Knighton, of the Brainerd Institute, for much information regarding the Flora of the Northwestern parts of the State, and for other valuable assistance.

JAN 19 1926

The localities of rare and curious plants have been carefully noted, and, for the convenience of inexperienced Botanists and collectors, general localities have been described, such as: *dry soils—damp, shady woods—hill-sides—open woods—meadows—wet grounds—swamps*, etc.

The Botanical Directory is a part of the one published by the Torrey Botanical Club, and includes the address of most of the living Botanists in North America and the West Indies.

In order to make the work more valuable to the collector, and especially to the beginner, I have introduced an article on the collecting, pressing, and preserving of Botanical specimens, with a description of suitable apparatus, and suggestions to teachers pursuing the study of Botany.

This Catalogue will fall into the hands of men who can form a just estimate of the difficulties and labor incident to the preparation of a work like this; consequently, I expect it to be judged with lenity and criticised with charity.

I shall be very thankful to have defects and omissions pointed out, that in a possible future edition the Catalogue may be perfected.

WHITE PLAINS,
April, 1874.

PREFACE TO THE REVISED EDITION.

THERE is perhaps no region of country whose Flora has been more carefully examined, and whose territory has been more thoroughly searched by botanists than the State of New Jersey. The reasons for this are, first, the Flora of the State is very prolific and remarkable; second, the State is situated between the two great cities of the nation, which are the abodes of many learned and enthusiastic botanists.

After the publication of the first edition of this Catalogue, it was ascertained that a number of plants growing in the State had been omitted, and some were included whose existence in the State is not satisfactorily established. It was also discovered that in some cases those marked *rare* should have been denoted *frequent*, and that others marked *common* were confined to more narrow limits than the author supposed. These defects have been corrected, and as far as possible all plants about which there is any doubt have been omitted.

It was also thought that the value of the Catalogue would be greatly enhanced by indicating in some way the plants known not to be indigenous. For this purpose the words used by Dr. Gray in his Manual are eminently suitable, and have been adopted here, and are explained under the head of Abbreviations.

When Botanists noticed the marvelous change in the productiveness of the soil of the middle counties of the State, which immediately succeeded the use of green sand as a fertilizer, it was predicted that with these altered conditions a new flora would appear. It would seem that we had a right to expect that some species would disappear to give place to others, whose conditions of growth would be especially provided for by this new fertilizer. In fact, we might reasonably expect the green sand region to have a peculiar flora. My observations, however, do not furnish me with any facts which justify such a conclusion. On the other hand, I am led to believe that the phosphates and soluble silicates contained in the marls, furnish materials for the growth and development which vegetation *in general* demands; hence we find only a more

vigorous growth and a greater degree of perfection, but not the introduction of any new plants nor the disappearance of old ones.

The Flora of New Jersey is very large, possessing about the same number of individuals as the extensive territory of the State of New York, whose Flora is regarded as remarkable for its extent, embracing as many species as the whole of New England.

This Catalogue enumerates 1,603 species of Phænogamous plants, 40 species of Equisetaceæ, Filices, and Lycopodiaceæ, and 28 species of marine algæ. (There are 325 species of Musci, and 100 species of Hepaticæ found within the limits of the State, not herein named), making an aggregate of 2,196 species.

Of these there are :

57 species of first-class trees,
37 species of second-class trees,
128 species of shrubs.

One of the most remarkable features of this Flora is, that with a few exceptions, all the plants growing in the State have representatives in the middle counties, a territory less than fifty square miles in extent.

Many localities are given upon the authority of the "Bulletin of the Torrey Botanical Club," and the botanists and naturalists whose names are found throughout the pages of the Catalogue.

My thanks are especially due to Prof. Thos. C. Porter, of La Fayette College, Prof. Wm. H. Leggett, editor of the Torrey Club Bulletin, Prof. F. Knighton, of Stroudsburg, Penn., Mr. C. F. Austin, of Closter, N. J., and Mr. John H. Redfield, of Philadelphia, for valuable information and assistance.

My thanks are also due to Prof. Samuel Lockwood, of Freehold, N. J., to Mr. Ephraim P. Empson, of Collier's Mills, Ocean Co., N. J., and to Mr. Thomas Ivins, of New Egypt, N. J., for information concerning the cranberry, and especially for putting me in possession of a large number of specimens of Vaccinium Macrocarpon, from different localities in the counties of Monmouth and Ocean, and to Mr. C. F. Austin for a list of the Musci and Hepaticæ.

FLORA OF NEW JERSEY.

THE State of New Jersey extends nearly two hundred miles from north to south, possessing a very varied surface, and a no less diversified geological formation. The land rises in the north and west, in mountain heights of three thousand feet, grading towards the south and east to low plains just a few feet above the sea level, and is the beginning of the territory along the eastern side of the Appalachian system, known as the Atlantic slope; where it first assumes the marked characteristic of low plains on the coast, succeeded inland by a hilly country, which grades upwards into mountains.

This difference of elevation from the south towards the north gives a wide range of temperature, so that while in the northern boundaries of the State plants are found common to New England, the southern and coast regions yield the vegetation of Eastern Virginia.

The whole western border is washed by the Delaware River, fed by tributaries from Pennsylvania and New York, bringing to its banks the seeds of a vast territory north and west of it.

Its eastern shores are washed by the Hudson River and the Atlantic Ocean, wafting the seeds of many lands to the alluvial plains which skirt its eastern boundaries. Its varied soil is another remarkable feature of this State; limestone in the north accompanied by iron and peat; marl, alluvial, arenaceous, and clay deposits, with red shales and heavy loam, impregnated with iron, in the middle; while in the south and east loose sands, peat and sphagnous bogs, and green sand deposits alternate with patches of loam, in which clay more or less predominates.

The wonderful variety of soil, the differences of elevation, and the wide range of temperature, combine to give rise to one of the most varied and remarkable Floras of the Western Continent.

The cedar swamps with which the pine regions are besprinkled, are the homes of some of the most beautiful and remarkable individuals of the flora of the temperate zones. There the Pogonia, the Habenaria, the Orchis, the Arethusa, the Calopogon, and the Sarracenia flourish; while the forests of the north and the middle, are adorned with the Liriodendron, the Magnolia, the Ilex, the Kalmia and the Rhododendron.

TO BEGINNERS IN THE STUDY OF BOTANY.

"Use your eyes." This curt sentence is attributed to the celebrated Agassiz. It is said that a young man presented himself to the naturalist, and asked him how he should begin the study of Zoölogy; to which question the great man replied, "Use your eyes." "How?" said the would-be pupil. The Doctor took from a shelf in his museum a jar, which held a small animal preserved in alcohol, set it before the young man and said, "Look at that." He looked and then asked, "What next?" The reply was, "Continue to look." The same question was repeated and the same answer was given, "Look." The inspection was carried on till the observer not only saw the animal as a whole; but noticed that it had parts, took account of their number, observed their connection, conjectured their uses, and admired their fitness. Several days having been employed in this way, the student began to express his admiration, showing that he had been thinking as well as looking. It was now the master's turn to be interested, and he exclaimed, "Young man, you have finished your first lesson; you have learned to use your eyes."

The beginner in Botany asks the same question, "How shall I begin?" A suitable and pertinent reply is, "Use your eyes."

It is not to be wondered at that the beginner in Botany, on glancing over a text-book, should be deterred by the vast catalogue of new and unusual words to be mastered, the great number of minute parts of which the plant is made up, and the apparent interminable number of individuals to be distinguished from each other, in the vegetable kingdom. The learner must not be dismayed by this formidable array of difficulties; he must not attempt at one view to take in the whole structure of the science, with all its dark avenues and intricate passages. He must act as one about to visit a large and complicated building, who stops in the vestibule and examines the directory, that he may learn how to enter the apartments in their order, and not have more than one under inspection at the same time.

Botany, it is true, has a language of its own, yet it is not necessary that it should be fully mastered at the outset. A very few of its technical terms are sufficient for the beginner, and they may be learned from the glossary as they are needed.

The accurate study of the minute parts of the plant is not necessary in

the first lessons, and the bewildering character of the vast number of individuals to be dealt with vanishes before the systematic classification which botanists have now reached.

The vegetable kingdom has about a hundred thousand species, each one of which differs from every other sufficiently to make it distinct, yet there are common characters to many, which allow them to be grouped into assemblages or families; so that the vast multitude, after all, is arranged under a comparatively small number of divisions. When the beginner is made to understand this fully, very much of the formidable character of the science disappears.

What the learner seems to need most at the very outset is some method of reaching the botanical name of a plant.

The accomplishment of learning the names of a number of plants does not make a botanist. It was said by a learned French writer, that "He had always thought it possible to be a very great botanist without knowing the name of a single plant."

This can be true only in part. It serves, however, to enforce the truth that learning to call a plant by its name is not all of botany.

Yet some means of leading the learner with ease and certainty to the name of a plant is of the first importance, and is without doubt the best method of interesting young persons in the subject.

The author of this Catalogue has used different methods to shorten and render more easy the determining of the names of plants; but on account of their defective and unscientific character they have not been published.

The following method he has found among the most useful:

NOTE.—(The student should possess either Wood's Class-Book, or Gray's Manual with the Lessons.)

Let the learner procure specimens, say of Ranunculus (Buttercup), consisting of the entire plant including the root. Consult the index, and find the name in the manual, or text-book. Then read the generic description, holding the plant in the hand (looking in the glossary for words not understood); continue to read till the description is seen to apply in every respect to the characters of the plant under inspection.

Then pass on to the specific descriptions, read each one in succession till the one that exactly corresponds to the plant is reached. The first lesson will then be ended.

Having determined one species of Ranunculus, there will be little difficulty in finding the names of other species. Proceeding in the same way with other common and well-known plants, such as the Violet, Catnip Mint, Chickweed, etc., the learner will soon be independent of an instructor.

To aid in putting this method into practice, the author has prepared a familiar description of the flower and its parts, and has added thereto a list of a few of our most common and well-known plants.

FLOWER.

The flower is that part of the plant which produces the seed, and thereby perpetuates the plant.

A complete flower is made up of four sets of organs arranged in groups: the outer group constitutes the *calyx*, the parts of which are *sepals;* the next group is called the *corolla*, and the parts are *petals;* next inside the petals is a group of thread-like organs called *stamens*, inside of which are the *pistils*.

The learner should procure flowers of the Buttercup, and examine them till he can distinguish the following

PARTS OF THE FLOWER:

CALYX (a cup).—The outer covering of the flower which when partly open resembles a cup into which the flower seems to sit. Examine a flower of the Buttercup, when not quite open; the outer green covering is the calyx, which in the case of the Buttercup is divided into five parts, called SEPALS.

COROLLA (a little crown).—That part which is called the flower, the part next to the calyx; examine the Buttercup when in full bloom, the yellow part above the calyx is the COROLLA; in the Buttercup it is composed of five parts, called PETALS.

STAMEN.—Inside of the corolla are grouped two sets of organs, one inside of the other. The outer group is made up of parts called STAMENS. A perfect stamen is made up of two parts, the FILAMENT and the ANTHER. The FILAMENT is the stem, and the ANTHER is a sac, or vessel, on the top, which contains a fine powder made up of very minute granules, called POLLEN.

PISTIL.—Inside of the group of stamens is a group of organs, called PISTILS—a perfect pistil is composed of three parts: The OVARY at the base, the STYLE above, on the top of which is the STIGMA. The STYLE is a tube through which the granules of pollen (having first fallen upon the stigma) pass into the ovary, where they come in contact with the embryo seeds, called ovaries, and fertilize them.

LIST OF PLANTS RECOMMENDED FOR THE USE OF THE BEGINNER.

The name of the order is printed as a head line. On the line below is the name of the genus, under the name of the genus, and a little to the right, the specific name will be found, and on the same line after the specific name, the common name.

To secure the full benefit of this mode of commencing, the learner should faithfully trace each plant he undertakes to examine through every step, in the description, no matter how well it may be known to him.

Order 1. RANUNCULACEÆ. Crowfoot Family

The plants selected of this order flower in early spring and summer.

Anemone.
A. nemorosa. (Wind-Flower—Low Anemone—Wood Anemone.)

Hepatica.
H. triloba. (Liver-leaf—Hepatica—Kidney-leaf.)

Ranunculus.
R. acris. (Buttercups—Tall Crowfoot.)

Caltha.
C. palustris. (Cowslips—Marsh Marigold.)

Order 10. CRUCIFERÆ. Mustard Family.

The Radish, Turnip, and Cabbage belong to this order.

Nasturtium.
N. officinale. (Water Cress—True Water Cress.)

Barbarea.
B. vulgaris. (Winter Cress—Yellow Rocket.)

Brassica.
B. alba. (White Mustard.)

Raphanus.
R. sativus. (Garden Radish.)

Order 13. VIOLACEÆ. Violet Family.

The Violets are fully described in this Catalogue. In most localities several species may be found.

Viola.
V. cuculata. (Violet—Common Blue Violet.)

Order 18. CARYOPHYLLACEÆ. Pink Family.

Silene.
S. Pennsylvanica. (Wild Pink—Catchfly.)
Stellaria.
S. media. (Star Wort—Common Chickweed.)

ORDER 32. **LEGUMINOSÆ.** PULSE FAMILY.

The Bean and Pea belong to this order.

Lupinus.
L. perennis. (Lupine.)

Crotalaria.
C. sagittalis. (Rattle Box.)

Trifolium.
T. repens. (White Clover.)

Wistaria.
W. frutescens. (Wistaria.)

Cassia.
C. nictitans. (Wild Sensitive Plant—Senna.)

ORDER 33. **ROSACEÆ.** ROSE FAMILY.

The Apple, Pear, Cherry, Strawberry, Raspberry, Blackberry, etc., belong to this order.

Prunus.
P. Virginiana. (Choke Cherry—Wild Cherry.)

Spiræa.
S. tomentosa. (Meadow Sweet—Hard Hack—Steeple Bush.)

Potentilla.
P. Canadensis. (Five Finger—Cinque Foil.)

Fragaria.
F. Virginiana. (Strawberry—Wild Strawberry.)

Rubus.
R. occidentalis. (Raspberry—Thimble-berry—Black Cap.)

R. Canadensis. (Low Blackberry—Dewberry—Running Blackberry.)

Rosa.
R. Carolina. (Swamp Rose—Wild Rose.)

ORDER 46. **UMBELLIFERÆ.** PARSLEY FAMILY.

The carrot and parsnip belong to this order.

Daucus.
D. carota. (Carrot—Wild Carrot—Common Carrot.)

ORDER 53. **COMPOSITÆ.** COMPOSITE FAMILY.

Eupatorium.
E. perfoliatum. (Thoroughwort—Boneset.)

Solidago.
S. odora. (Golden Rod—Sweet Golden Rod.)

Taraxacum.
T. dens-leonis. (Dandelion.)

ORDER 71. **LABIATÆ.** MINT FAMILY.

Mentha.
M. viridis. (Mint—Spear Mint.)

Nepeta.
N. cataria. (Cat Mint—Catnip.)

DIRECTIONS

FOR

DRYING AND PRESERVING PLANTS.

It is a matter of very great importance to the Botanist to possess a good Herbarium. Nearly every student in Botany makes an attempt to form one, but it is frequently done in so slovenly a manner that the collection is worthless.

Apparatus for Drying Plants.

Let a quantity of old newspapers, or what is still better, coarse white wrapping-paper,* be procured and cut into pieces sixteen inches long and eleven and a half inches wide; then place them together in piles of eight in thickness, and stitch the corners, so as to keep them in their places. Having prepared seventy-five or a hundred such pads, which I shall call *driers*, get two pieces of pine boards of the same size as your driers, then provide yourself with a hundred or more sheets of newspaper† folded once, so as to allow a plant to be placed between the folds. Let these sheets be cut to correspond with your driers. You will then be supplied with the simplest apparatus for drying plants.

To the Collector.

Provide yourself with a tin box seventeen inches long, and a florist's trowel (a strong butcher's knife will do very well). In collecting plants, if they are small and herbaceous, procure the whole plant, including the root; handle it carefully, and if the root is dirty wash it by shaking it gently in water, and afterwards flirt as much of the water off as you can without injuring the plant, then place it carefully in your box. If possible, procure ten or a dozen good specimens of the same plant. The best time for collecting is clear weather; and plants are in a proper state for collection when they are in full flower. Sometimes small

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* The publishers of the "American Naturalist," Messrs. Putnam & Co., Salem, Mass., advertise an excellent paper for driers, and also suitable paper for mounting plants.

† White paper, such as printers use, is better, and for very delicate plants is necessary.

plants may be procured, having both flowers and fruit at the same time. If possible, they should be procured in that state. If this cannot be done, specimens with flowers should be procured, and afterwards, those with fruit. On some plants the flowers appear before the leaves, as is the case with many trees, in such cases the leaf must be procured afterwards but should be taken from the same plant.

Pressing.

After having collected some specimens, lay one of your boards on the floor or on a table, and place three driers upon it; then upon the top of the driers lay a sheet of paper which you have prepared for the purpose, and open it, letting one half of the sheet lie over upon the table; then lay a plant upon that which rests upon the driers, and after having arranged the leaves, flowers, root, and *fruit*, if it has any, so as to present a natural appearance, turn the half sheet over it, and lay upon it three more driers, and so on, till you have arranged as many as you wish; then lay the other board upon the top of the whole, and place upon the board a weight. A large stone may be used for this purpose, or several may be used. Some plants need heavier weights than others. The weight should be just sufficient to keep the leaves extended smoothly; if too much is used, it crushes the parts and causes them to turn black. Some plants will turn black in defiance of the most careful management. Most herbaceous plants change their color to some extent, yet, with care, they will retain much of their natural appearance.

Having left the plants in press for ten or twelve hours, the top board should be taken off and laid upon the table beside the pile, three fresh driers laid upon it, and the damp ones should then be removed from the top of the uppermost plant, and the plant be laid carefully upon the top of the three fresh driers without removing it from between the folds of the paper in which it was placed; then three fresh driers laid upon the top of the plant, and so on till all have been removed, when the board that was at the bottom may be laid upon the top, and the weight replaced; the damp driers should then be placed on a line to dry. This process of changing should be carried on till the plants are in the condition of well-cured hay. They may then be removed from the press and placed between the folds of dry paper, cut to the size of the driers. When a plant is put into the press, a bit of paper should be laid in with it, on which should be written the *generic* and *specific* names of the plant; also the name of the place where it was collected, and the date; and if anything uncommon is noticed about it, this should be mentioned, as follows:

Viola,
lanceolata;
Freehold, Monmouth Co., N. J,
May 10th, 1856.
Growing in a peat bog.
Flowers unusually large.

Presses.

1. The press already described, consisting of two pieces of boards of the size of the driers, with a stone or any convenient heavy body for a weight, is the most simple.

2. A press with a screw to apply force is in common use, and has its advantages on account of its completeness.

3. Two pieces of binder's boards, with muslin glued on them and the whole varnished with shellac varnish, and fastened together with straps, are sometimes used, and are convenient, because they are light and may be carried into the field.

4. Messrs. Barnes & Co., of New York City, keep for sale a complete apparatus for collecting and drying. Their press has sides of wire gauze, which possesses the advantage of allowing drying to go on more freely than any other press. Prof. Wood is the inventor of this press.

Size of Plants.

When a plant is too large to lay upon the paper, it may be bent, but in no case should it be cut. Of large plants, such as shrubs and trees, a branch may be obtained containing good specimens of leaves, flowers, and *fruit*, if possible. In collecting herbaceous plants, those of medium size should be obtained. The author has been in the habit of collecting, so far as practicable, all the forms of a plant, from the overgrown specimen to the dwarf.

Preserving Plants.

Having dried and labeled a number of plants, white paper of a fair substance may be obtained and cut to the size of the driers; then the specimens may be fastened to the sheets in any of the following ways. They may be stitched on with cotton thread, or a little glue may be touched to the leaves, and parts of the stem, and thus fastened to the paper. A very neat way of doing it is to dissolve Gum Arabic to the consistency of cream, and put into a gill of the solution a lump of rock-candy as large as a hickory-nut. When the whole is perfectly dissolved, spread it with a camel's-hair brush over common writing paper (*having first laid the paper smoothly on a table*), and allow it to dry. Continue to put on coat after coat, until it presents a smooth, glossy surface; when dry, it is fit for use. After having placed the plant as it is to lie on the paper, cut into narrow strips the gummed paper, and after wetting it in your mouth, lay it across the stem and parts that you wish to secure to the paper. The label may be written upon this gummed paper, and laid over some part of the stem, and will aid in holding the plant to the paper; in this case two specimens should be preserved so as to show both sides of the leaf.

To preserve specimens from the depredations of insects, make a saturated solution of *corrosive sublimate*, in absolute alcohol, then add an equal bulk of water, and with this solution wet the parts of the plants attacked.

Case for Genus Covers.

After having thus attached the plants to white paper, all the Species of the same Genus should be placed together in the fold of a strong sheet of brown paper and the name of the Genus written or printed on the corner, and these should be arranged in the order of the Flora, and laid in a case constructed for the purpose with pigeon holes eighteen inches deep and thirteen inches wide. A very cheap case can be made for a small collection, by taking packing-boxes, used for packing sale boots, and placing shelves in them. These boxes are made about a foot wide, and may be had for a few cents at almost any country or village store.

Note.—Dr. Gray, in Silliman's Journal, criticises the above recipe for the destruction of insects, or for preserving botanical specimens from the depredations of insects. The eggs which produce some of the insects that prey upon plants are deposited in the flower, and are frequently hatched while the plant is undergoing the process of drying. On this account it is best to apply the poison while the specimens are in the press. A very strong solution applied to delicate plants in a green state sometimes discolors them, hence, for plants in this condition, the above weak solution is preferable.

For specimens in a dried state, Dr. Gray's Recipe is better, for the reasons which he gives:

First.—Alcohol is a more subtile fluid than water, and therefore enters the cavities more easily and rapidly, conveying the poison with it.

Second.—Alcohol evaporates with greater rapidity than water, and will therefore harm dried specimens less than water would.

Dr. Gray's Recipe is as follows:

"Dissolve an ounce of corrosive sublimate in a quart of absolute alcohol, and use it without dilution."

The poison in either case is applied by dropping it on the specimens from a dropping-tube, passed through the cork of the bottle which contains the liquid.

SUGGESTIONS TO TEACHERS.

Botany furnishes the most interesting, convenient, and diversified field for the study of nature.

The teachers of the schools in our rural districts are especially favored in being surrounded by the objects for the practice of this pursuit.

Every teacher should have some favorite study to occupy his leisure hours, and none can be more interesting and inviting for a resident in the country than Botany.

The pursuit of any department of science will soon impress upon the learner the great importance of thorough investigation and minute accuracy.

The *teacher*, *especially*, is benefited by the training it affords, he will not only come to see the necessity for accuracy in his investigations, but he will imperceptibly fall into the habit of minute and clear description in imparting instruction. It will necessarily teach him to require verbal accuracy in recitations, the great secret of all successful instructors. He will be introduced, also, to other departments of knowledge as accessories. Let him so far pursue the study of Botany as to become interested in it, and he will become a frequent and delighted visitor within the portals of other useful branches of science.

Directions for Securing Assistance.

As I am addressing teachers allow me to put these suggestions in the form of a familiar talk with an individual.

Having provided yourself with suitable books* and apparatus, select from the catalogue of living Botanists the name of a person with whom

* As Floras, "Gray's Manual" and "Wood's Botanist and Florist," are the best. Gray's lessons should be carefully studied. The Key to the natural orders in "Gray's Field, Forest, and Garden Botany," is the most simple. To insure intelligent progress, careful attention should be given to structure. For this purpose "Gray's Structural Botany" should succeed the Lessons. "Lindley's Ladies' Botany" is a good book for beginners.

to correspond; collect, dry, and prepare, as already directed, a number of specimens and attach labels to them, numbered 1, 2, 3, etc., and send them in a secure package (a light wooden box of the size of your driers is the best) to your correspondent, who will return you the generic and specific names of numbers 1, 2, 3, etc., which you can write on your own labels of the corresponding numbers.

N. B.—Having named your plants, take your Flora and study the characters of the Order, Genus, and Species of each plant, and you will soon be independent of all assistance except such as you will be able to get from your books.

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Meehan, Thomas, Germantown.
Michener, Dr. Ezra, Toughkenamon, Chester Co.
Moyer, Dr. I. S., Quakertown.
Porter, Prof. Thos. C., Easton.
Ralston, Prof. J. G., Norristown.
Rau, Eugene A., Bethlehem.
Rau, Robert, Bethlehem.
Redfield, John H., 216 W. Logan Square, Philadelphia.
Rothrock, Dr. Joseph T., West Chester.
Seal, Thomas F., Unionville, Chester Co.
Shaffer, Dr. Charles, Philadelphia.
Sinclair, J., Lithographer, Philadelphia.
Smith, Aubrey H., 435 Liberty street, Philadelphia.
Smith, Chas. E., 216 S. 12th street, Philadelphia.
Smith, Daniel B., Germantown.
Stauffer, Jacob, Lancaster.
Tryon, Geo. W., Jr., Acad. Nat. Sci., Philadelphia.
Waring, W. G., Tyrone.
Whittem, Wm. A., Chestnut Hill, Philadelphia.
Wirt, I. R., McVeytown.
Wister, W. Wynne, Germantown.
Wolle, Rev. Francis, Bethlehem.
Wood, Prof. H. C., Jr., 1706 Chestnut st., Philadelphia.

RHODE ISLAND.

Bailey, W. W., Providence.
Bennett, Jas. L., Providence.
Clark, Jas. H., Newport.
Congdon, Joseph W., East Greenwich.
Hunt, George, Providence.
Olney, Stephen T., 18 Brown street, Providence.
Trippe, Miss Ella F., Providence.

SOUTH CAROLINA.

Gibbes, L. E., Charleston.
Mellichamp, Dr. J. H., Bluffton.
Ravenel, H. W., Aiken.

TENNESSEE.

Blakie, Geo. S., Nashville.
Branham, Prof. J. R., Brownsville College.
Curtis, Dr. Josiah, Knoxville.

TEXAS.

Buckley, S. B., Austin.
Lindheimer, Ferdinand, New Braunfels,
Reverchon, J., Dallas.
Young, Mrs. M. J., State Botanist, Houston.

UTAH.

Townsend, J. L., Salt Lake City.

VERMONT.

Brainard, Prof. H., Middlebury College.
Brown, Mrs. A. E., Box 89, Brattleboro'.
Cutting, Dr. H. A., Lunenburg.
Frost, Chas. C., Brattleboro'.
Herrick, M. L., Rutland.
Perkins, Prof. Geo. H., Burlington.
Phelps, Dr. Edward E., Windsor.
Pringle, C. G., Charlotte.

VIRGINIA.

Curtiss, A. H., Liberty, Bedford Co.
Shriver, Howard, Wytherville, Wythe Co.
Stabler, Dr. R. H., Alexandria.

WASHINGTON TERRITORY.

Smith, Prof. C., Vancouver Seminary.

WISCONSIN.

Bingham, Miss Ada B., Monroe.
Copeland, Prof. H. E., White Water.
Daniells, Prof. W. W., Madison.
Douglas, Dr. James S., Milwaukee.
Jordan, Prof. D. S., Appleton, Outagamie Co.
Kumlien, Thure, Busseyville P. O.
Lapham, I. A., LL.D., Milwaukee.
Sherman, Dr. Lewis, Milwaukee.

RESIDENCE UNKNOWN.

Burbank, Prof. I. S.
Holzer, Rev. L.
Shattuck, Miss M. M.

WEST INDIES.

Blain, José, near Santa Cruz, Jurisdiccion de San Cristobal, Cuba.
Calderon, Chas. H., St. Thomas.
Court, Dr. I., Port of Spain, Trinidad.
Dahl, Christian, St. Croix.
Gundlach, Juan (Johannes), Havana, Cuba.
Krebs, Henry, St. Thomas.
March, W. T., Spanishtown, Jamaica.
Morales, Dr. Sebastian Alfredo de, Calle de Velarde No. 5, Matanzas, Cuba.
Presas, Manuel J., *ibidem.*
Sauvalle, Francisco Adolfo, Havana, Cuba.
Wilson, Nathaniel, Botanic Gardens, Bath, Jamaica.

SUPPLEMENT TO THE BOTANICAL DIRECTORY.

1876.

BRITISH AMERICA.

Chalmers, Rob't, Campbellton, New Brunswick.
McKay, A. H., Pictou, N. S.
Roy, Mrs., Royston Park, Owen Sound, Ontario.

UNITED STATES.

ALABAMA.

Mohr, Charles, Box 1,277, Mobile.
Tutwiler, Miss Julia S., Green Springs. *Absent.*

ARKANSAS.

Harvey, Prof. F. L., Fayetteville.

CALIFORNIA.

Austin, Mrs. R. L., Quincy, Plumas Co.
Bolander, Prof. H. N., San Francisco.
Carr, Mrs. Jeanne C., Sacramento City.
Cleveland, D., San Diego.
Coan, Mrs. Dr., Oakland.
Gibbons, Dr. Wm. P., Alameda.
Green, Rev. E. L., vid. Col.
Jacobs, T. R., Petaluma.
Loomis, Miss H. A., Oakland.
Miller, F. A., Miller & Sievers, San Francisco.
Wood, Mary E. *Not found.*

COLORADO.

Green, Rev. E. L., Georgetown.
Henry, W. A., Boulder.
Williams, E. C., Boulder.
Wilson, Wm. M., Denver.

CONNECTICUT.

Barron, Alfred, Wallingford.
Bennett, Dr. Wm. C., Danbury.
Coleman, N., Bloomfield. *Removed from Mich.*
Eaton, Prof. Daniel C., New Haven.
Kleeberger, Geo. R., vid. Wis.

DELAWARE.

Febiger, Christian, Wilmington.
Tatnall, Edward, Wilmington.

DISTRICT OF COLUMBIA.

Chickering, Prof. J. W., Deaf Mute College, Washington.
Curtis, Dr. Josiah, Washington.
Schott, Dr. Arthur. *Deceased.*

FLORIDA.

Chamberlin, S. N., Dayton, Volusia Co.

GEORGIA.

Feay, Dr. Wm. T., Savannah.
Goulding, T. B., Augusta.
Green, Dr. G. M., Macon.

ILLINOIS.

Adams, Geo. B., Pecatonica.
Babcock, H. H., 11 Eighteenth St., Chicago.
Bebb, M. S., Fountaindale, Winnebago Co.
Bibbins, R. K., Plattville, Kendall Co.
Briggs, S. A., Englewood.
Calkins, W. W., 236 S. Water St., Chicago.
Everts, Miss M. M., Chicago.
Johnson, Dr. H. A. *Not active.*
Monroe, H. E., 781 W. Jackson St., Chicago.
Patterson, Harry N., Oquawka.
Rauch, Dr. J. H. *Not active.*
Ridgway, Robert, Mt. Carmel.
Schneck, Dr. J., Mt. Carmel.
Swezey, Goodwin D., Rockford.
Young, Henri W., Galva.?

INDIANA.

Barnes, C. R., Madison.
Belsham, A., Richmond.
Charlton, T. J., Vincennes.
Coulter, John M., Hanover.
Coulter, M. S., Logansport.
Dunkle, A. W., Vernon.
Holland, Rev. F. R., Hope.
Hussey, Prof. John, La Fayette.
Young, A. Harvey, Hanover, Jefferson Co.

INDIAN TERRITORY.

Butler, Geo. D., Atoka, Cherokee Nation.

IOWA.

Arthur, J. C., Charles City.
Burgess, Rev. Robt., Ames.
Halway, Edw. W. D., Decorah.

KANSAS.

Hall, Prof. E. vid. Hall, Elihu, Ill
Snow, Prof. Frank H., Lawrence.

KENTUCKY.

Atkinson, John C., Henderson.
Darby, Dr. John, Millersburg.

LOUISIANA.

Featherman, Prof. A., Louisiana University.
King, Prof. Pendleton, Jr., Baton Rouge.

MAINE.

Fuller, Chas. B., Portland.
Scribner, F. Lamson, Augusta.

MASSACHUSETTS.

Anderson, Miss Susan E., Shelburne.
Austin, E. P., Cambridge.
Bishop, Edward F., Amherst. *Deceased.*
Booth, Miss Mary A., Long Meadow.
Bowen, vid. Part I.
Clarke, Miss Cora H., Box 108, Jamaica Pl'n.
Davenport, Geo. E., 8 Hamilton Place, Boston.
Farlow, Prof. Wm. G., Botanic Garden, Cambridge.
Faxon, Chas. E., 262 Purchase St., Boston.
Faxon, Edwin, " " " "
Foster, Wm. L., East Stoughton.
Freeman, Miss H. E., Box 1,800, Boston.
Hawes, Miss Charlotte W., 9 Allston Street, Boston.
Hedge, F. H., Jr., Public Library, Lawrence.
Hitchings, E. H., 40 Chambers St., Boston.
Goodell, L. W., Amherst.
Jessup, Rev. H. G., Amherst.
Knaop, Arthur M., 52 Montgomery Street, Boston.
Lusk, Rev. Mrs. *Uncertain.*
Mann, B. Pickman, 19 Follen St., Cambridge.
Merrill, J. Warren, 400 Broadway, Cambridgeport.
Morong, Rev. Thomas, Ipswich.
Page, Miss Ann L., Danvers.
Palmer, Dr. Edward, care of Boston Natural Historical Society, Boston.
Peck, Rev. David. *Deceased.*
Putnam, C. A., Salem.

Putnam, Francis, Salem.
Putnam, Granville B., 178 W. Brookline St., Boston.
Sears, J. H., Danvers.
Underwood, Miss C. A., Barre.
Watson, Sereno, vid. Part I.
Wells, Miss Corrie E., Shelburne.
Willey, Henry, New Bedford.

MICHIGAN.

Coleman, N., vid. Ct.
Gillman, Henry, 80 Elizabeth Street-West, Detroit.
Lowland, Mary A., Kalamazoo.
Lyons, Dr. A. B., 54 Fort St.-West, Detroit.
Millington, Mrs. L. A., South Haven, Van Buren Co.
Palmer, Dr. Elmore, Dexter.
Tuthill, Frank H., Kalamazoo.
Wheeler, Chas. F., Hubbardston, Ionia Co.

MINNESOTA.

Holmes, Jas. P., Minneapolis.

MISSOURI.

Riley, Prof. C. V., State Entomologist, Room 42, Mut. Ins. Build., Sixth and Locust Sts., St. Louis.

NEBRASKA.

Cripe, John, Crowellton, Buffalo Co.

NEW HAMPSHIRE.

Blake, Rev. Joseph, Gilmanton.

NEW JERSEY.

Apgar, E. A., Trenton.
Bloomfield, Miss A. L., West Orange.
Dame, Mrs. Wm., Newport.
Edwards, Dr. A. M., 120 Belleville Avenue, Newark.
Fish, Henry, Vineland.
Freygang, Gustav., 88 Garden St., Hoboken.
Knighton, Rev. Dr. Frederick, Cranbury, Mercer Co.
Parker, Chas. F., 524 N. 2d St., Camden.
Rusby, H. H., Franklin.
Scarborough, Geo., Vineland.
Scarborough, Mrs. Lizzie, Vineland.
Thompson, David L., Plainfield.
Tollman, Prof. E., 292 Garden St., Hoboken.

NEW MEXICO.

Fries, V., Fort Defiance.

NEW YORK.

Arnold, Chas. N., Poughkeepsie.
Barnes, Mrs. Dr., Syracuse.
Bedford, P. W., Box 1,738, P. O., New York.
Brown, Addison, 16 Wall St., City.
Comstock, Fred. H., 262 Broadway, N. Y.
D'Alfonce, Joseph E., White Plains.
Day, David F., 259 Wash'n St., Buffalo.
Dowd, Miss S. E., Fairport.
Errington, Miss G. N., Clifton, Richm'd Co.
Errington, Miss H. N., " "
Fuller, C. H., East Irvington.
Gross, Dr. O. R., 342 W. 32d St., New York.
Hadaway, Mr., Stony Brook, Suffolk Co.
Hall, I. H. *Absent.*
Hatch, Philo F., Granville, Washington Co.
Hawkins, Albert, Wappingers Falls.
Hervey, Rev. A. B., 10 N. 2d St., Troy.
Hinds, Wm. A. (O. C.), Oneida.
Hosmer, Jane, Syracuse.
Hoysradt L. H., Pine Plains, Dutchess Co.
Kersting, R., Box 221, Yonkers.
Kinsman, Miss Jennie E., Fredonia, Chautauqua Co.
Koehler, Dr. August. 257 2d Ave., City.
Lewis, H. A., West Farms, New York City.
Matthews, Dr. Washington, U. S. A., Fort Hamilton, Kings Co.
Merriam, Jas. S., 61 Liberty St., City.
Miner, Geo. G., Fredonia.
Moffett, Sam. E., "
North, Prof. Ed., Clinton, Oneida Co.
Osborne, Dr. C. S., 340 Hart St., Brooklyn.
Pollard, F. A., 506 E. 119th St., New York.
Poppey, R. C., Box 747, Poughkeepsie.
Parker, E. H., M.D., Poughkeepsie.
Pell, W. H., Flushing.
Richardson, Miss Elizabeth, Fredonia.
Roe, Miss Mary W., Clyde, Wayne Co.
Rudkin, W. H., 74 William St., City.
Rust, Mrs. Styles M., Syracuse.
Schoeney, L., Mt. Sinai Hospital, City.
Stevenson, Dr. W. G., Poughkeepsie.
Thompson, David L., Fourth National Bank, City.
Warne, H. A. (O. C.), Oneida.
Wibbe, Rev. H., St. Peter's Church, Oswego.
Wintringham, J. P., Box 2,139, New York.
Wright, Dr. Samuel H., Penn-Yan, Yates Co.
Young, Henri W., vid. Ill. ?

NORTH CAROLINA.

Hyamus, M. E., Statesville, Indell Co.
Talichet, H., Wilmington.

OHIO.

Biddlecome, Miss H. J., Springfield.
Biscoe, Prof. T. D., Marietta.
Cassells, Prof. J. Lang, 431 Euclid Avenue, Cleveland.
Klippart, John H., Columbus.
Leue, Dr. A. *Uncertain.*
Mathews, Mrs. Maria D., Painesville.
Mohr, Paul, 161 W. 3d St., Cincinnati.
Prescott, Miss Lucinda T., Painesville.
Sapp, Chas. H., Ravenna, Portage Co.
Spence, Miss E. J., Springfield.

OREGON.

Howell, Joseph, Willamette Slough, Multnomah Co.
Lee, L. Wilmer, Browntown, Josephine Co.
Nevius, Rev. R. D., Baker City.

PENNSYLVANIA.

Bodley, Rachel L., Prof. in Women's Medical College, Philadelphia.
Garber, Dr. A. P., Columbia, Lancaster Co.
Geddes, Prof. Wm. N., Williamsport.
Lamborn, Robert H., 216 S. 4th St., Philadelphia.
Mill, C. P., Eatonville, Philadelphia.
Rau, Eugene A., Bethlehem.
Shattuck, Miss M. M., 3,815 Walnut St., Philadelphia.
Smith, Dr. George, Darby, Delaware Co.
Stewart, Jas. W., New Wilmington, Lawrence Co.
Wolle, Rev. Francis, Bethlehem.

RHODE ISLAND.

Bailey, W. W., Providence.
Battey, Thos., Friends' School, Providence.
Congdon, Joseph W., East Greenwich.
Russell, L. W., Providence.

TENNESSEE.

Heynds, F. P., Ralston Station.

TEXAS.

Joor, Dr. J. F., Harrisburg.

UTAH.

Townsend, J. L. *Not found.*

VERMONT.

Brainerd, Prof. Ezra, Middlebury.
Brown, Mrs. A. E., Box 25, Bellows Falls. *Not active.*
Herrick, M. L. *Not active.*
Morgan, A. P., North Pomfret.
Pringle, C. G., Charlotte.
Seely, Prof. H. M., Middlebury.

VIRGINIA.

Forney, D. S., Allisonia, Pulaski Co.
Hathaway, Jas. L., 108½ Water St., Norfolk.
Shriver, Howard, Wytheville, Wythe Co.

WISCONSIN.

Kleeberger, Prof. Geo. R., White Water.

NOTE.—In the Bulletin of the Torrey Botanical Club supplements to the Directory will be published from time to time.

ABBREVIATIONS.

North.—Refers to all parts of the State north of Mercer and Middlesex Counties.

North-East.—Has reference to Bergen and Hudson Counties.

Middle.—Means Mercer, Middlesex, Monmouth, Ocean, and Burlington Counties.

Low Country.—Indicates all parts of the State south of Middlesex and Mercer Counties.

South.—Means all parts of the State south of Burlington County.

Throughout.—Signifies that the plant after which it is written grows in all parts of the State.

T. C. B.—Means "Torrey Club Bulletin," or on the authority of the Bulletin of the Torrey Botanical Club.

(Nat. Eu.)—Naturalized from Europe, means that the plant after whose name it is written has been introduced from Europe by seed or otherwise, and is growing and propagating itself freely without cultivation.

(Adv. Eu.)—Introduced from Europe, signifies that the plant after whose name it is written has been introduced by seed or otherwise, and is growing without cultivation, but is not fully established.

A.....Atlantic County.
Bur.....Burlington County.
G.....Gloucester County.
Hud.....Hudson County.
Hun.....Hunterdon County.
M.....Monmouth County.
Mer.....Mercer County.
Mid.....Middlesex County.
Mor.....Morris County.
O.....Ocean County.
W.....Warren County.

N
SUSSEX
PASSAIC
BERGEN
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WARREN
MORRIS
ESSEX
HUDSON
UNION
HUNTERDON
SOMERSET
MIDDLESEX
MERCER
MONMOUTH
40
OCEAN
BURLINGTON
CAMDEN
GLOUCESTER
SALEM
ATLANTIC
CUMBERLAND
CAPE MAY
39

Hepatica, Dill. (Liver-leaf—Liverwort.)

H. acutiloba, DC. Montclair. (*Wm. Churchhill.*)

H. triloba, Chaix. Flowers purple ; scapes hairy ; calyx consists of three parts—ovate, obtuse, silky, hairy—separated from the petals. Flower varying from deep purple to a dingy white. March to May. I have collected this plant in the woods near Princeton, in February, in full flower. The leaves vary in form from three to four, rarely five, distinct rounded lobes to kidney shape ; sometimes cordate, the early leaves covered with silky hairs, especially when the plant is found on dry hill-sides. Bears cultivation well.

Thalictrum, Tourn. (Meadow-Rue.)

T. anemonoides, Michx. (Rue-leaved anemone.) Stem, six to eight inches high ; root-leaves on petioles nearly or quite the length of the stem ; twice three divided ; stem-leaves in a whorl just below the flowers, and ternate ; parts rounded and heart-shaped at the base. Flowers white, in a cluster at the summit of the stem. Found on southern exposures of dry, wooded hill-sides, usually near trees or stumps, common.

T. dioicum, L. Princeton, not common, Hud. (*T. C. B.*), frequent in Sussex. (*Austin.*)

T. purpurascens. Bergen Co. (*Austin.*)

Var. ceriferum, common in Bergen Co. (*Austin.*)

T. Cornuti, L. Meadows and along streams, throughout.

Ranunculus, L. (Crowfoot—Buttercup.)

R. divaricatus, Schrank. Squan and Shark rivers, rare. (*Knieskern.*)

R. aquatilis, L.

Var. trichophyllus, Chaix, Andover. (*Porter.*)

R. multifidus, Pursh. West Hackensack, Saddle river. (*Woolson.*) (*Leggett.*) Closter. (*Austin.*)

R. alismefolius, Geyer. This species is so different from the general character of the genus that it needs a passing notice. The young botanist, after inspecting R. repens, which appears among the early spring flowers, would not suspect this to be Ranunculus. I have never found it in any place except the swamp near Penn's Neck, about two miles east of Princeton. It delights in damp places, frequently growing in the water, has a long stem, from two to three feet in extent, which is prostrate unless held up by surrounding plants. The leaf is lance-shaped ; flowers bright yellow, smaller than R. repens. Woodbridge. (*Woolson.*) Weehawken. (*T. C. B.*) Common north. (*Austin.*)

R. Flammula, L.

Var. reptans, I have never seen growing in the State. I put it down on the authority of Dr. Torrey. Prof. Porter reports it as growing along the Delaware, above Phillipsburg.

R. pusillus, Poir. Princeton, Dr. Torrey. Mor. (*Austin.*)

R. Cymbalaria, Pursh. Head of Barnegat Bay, near Point Pleasant, near salt water, quite rare. O. (*Knieskern.*)

R. abortivus, L. Shady hill-sides and banks of streams, common.

Var. micranthus. Palisades. (*Austin.*)

R. sceleratus, L. Wet ditches and pools, near New Egypt, O., frequent about Lawrenceville, Mer.

R. recurvatus, Poir. Shady hill-sides and banks of streams. Middle and north.

R. Pennsylvanicus, L. Princeton, Freehold, and north.

R. fascicularis, Muhl. Meadow woods, near Squan Village, also about Hightstown and open woods near Freehold, M.

R. repens, L. (Buttercup.) This is one of the plants that first greets us in spring with its flowers, appearing in April and continuing throughout the summer. It is very variable, and the young botanist is likely to mistake its different forms for separate species ; there is also danger of mistaking it for fascicularis. It flowers first in south exposures of damp meadows. The flowers are large, bright yellow, growing paler with age. Accurately described in Gray and Wood. Found throughout the State.

R. bulbosus, L. Toms River, O. and Mer., rare. Common in Sus. (*Austin.*) Nat. Eu.

R. acris, L. Is our common buttercup, and loves damp meadows, but does not refuse to adorn the roadsides throughout the State. It varies from one to three feet in height. In damp and wet places it is almost free from pubescence, while in dry places the stem and leaves are supplied with hairs. Well described in Gray and Wood. New Egypt, O. and M., common. (Nat. Eu.)

Caltha, L. (Marsh Marigold—Cowslip.)

C. palustris, L. This plant is found sparingly in Mer. and M. Is not generally used for greens in these localities ; but in Rockland County, N. Y., where it grows in great abundance, it was once a favorite pot-herb and is called there Meadow Beauty. Camden. (*Redfield.*) Common in the north-eastern parts of the State. (*T. C. B.*)

Var. parnassifolia, Raf. Cedar swamps. (*Beck.*)

Var. flabellifolia, Pursh. (*Dr. Porter.*)

Trollius, L. (Globe-flower.)

T. laxus, Salisb. Budd's Lake. (*Porter.*) Closter, frequent. (*Austin.*)

Coptis, Salisb. (Gold-thread.)

C. trifolia, Salisb. Found sparingly in the western part of Mer. About Budd's Lake. (*Porter.*) New Durham. (*T. C. B.*) Closter (*Austin.*)

Helleborus, L. (Hellebore.)

H. viridis, L. W. (*Knighton.*)

Aquilegia, Tourn. (Columbine.)

A. Canadensis, L. Found sparingly in the hills back of Princeton, in the eastern parts of M., also in the north. Bears cultivation well.

A. vulgaris, L. Belvidere. (*Knighton.*) (Adv. Eu.)

Hydrastis, L. (Orange-root—Yellow Puccoon.)

H. Canadensis, L. W. (*Knighton.*) Sus. along the Delaware. (*Austin.*)

Actæa, L. (Baneberry.)

A. spicata, L. var. rubra, Michx. Common about Princeton and Lawrenceville, Mer., and Cream Ridge, M., and north.

A. alba, Bigel. Near Princeton, in the hills, and northward.

Cimicifuga, L. (Bugbane.)

C. racemosa, Ell. Common in Mer. about Lawrenceville (*Lanning*), and north-eastern parts of the State.

Order 2. **MAGNOLIACEÆ.** Magnolia Family.

Magnolia, L. (Magnolia.)

M. glauca, L. (Sweet Bay, called by some Swamp Sassafras.) This plant is admired for its beautiful green foliage, which is semi-evergreen, resembling in form the leaves of the grandiflora. It likes wet places, but does well under cultivation from the middle of the State southward. A very large fine specimen is growing in the grounds recently owned by the late Judge Field, of Princeton. New Durham. (*Austin.*)

Liriodendron, L. (Tulip-tree—White-wood.)

L. Tulipifera, L. This noble tree grows sparingly throughout the western parts of M. and all over Mer., in the northern parts of Bur. and southern parts of Mid., and throughout the north.

Order 4. **MENISPERMACEÆ.** Moonseed Family.

Menispermum, L. (Moonseed.)

M. Canadense, L. M. (*Dr. Torrey.*) Palisades. (*Austin.*)

Order 5. **BERBERIDACEÆ.** Barberry Family.

Berberis, L. (Barberry.)

B. vulgaris, L. Near Red Bank, M., Bergen Hills (*T. C. B.*), not common; also back of Jersey City. (*Redfield.*) Nat. Eu.

Caulophyllum, Michx.

C. thalictroides, Michx. Pascack and Closter.
Also Preakness. (*T. C. B.*)

Podophyllum, L. (Mandrake—Love-apple.)

P. peltatum, L. This is a striking plant in appearance on account of its shield-shaped leaves. The fruit is collected and eaten by children; it has a sweetish insipid taste. The root is medicinal, and is administered to excite the liver. Near Princeton and Cream Ridge, in M., common north.

Order 6. NYMPHÆACEÆ. Water-Lily Family.

Brasenia, Schreber. (Water-shield.)

B. peltata, Pursh. Near Barrsville, O., and Shark River, M. Frequent, Spring-Garden, Camden. (*C. F. Parker.*)

Nelumbium, Juss. (Nelumbo—Sacred Bean.)

N. luteum, Willd. Mill-pond, Woodstown, also in Sus. (*Gray.*)

Nymphæa, Tourn. (Water-Nymph—Water-Lily.)

N. odorata, Ait. Ponds and stagnant pools, common.
Var. minor, Sims. Southern Jersey, common.

Nuphar, Smith. (Yellow Pond-Lily—Spatter-Dock.)

N. advena, Ait. Still or stagnant water, common.
N. luteum, Smith.
Var. pumilum. Hackensack, and near Closter. (*T. C. B.*)

Order 7. SARRACENIACEÆ. Pitcher Plants.

Sarracenia, Tourn. (Side-saddle Flower—Pitcher-Plant.)

S. purpurea, L. This plant deserves notice on account of its singular leaves, which grow in the form of cups. The flower is also remarkable. The inner surface of the cups is thickly besprinkled with stiff hairs; and the cups themselves are usually partly filled with water, in which insects, mostly flies, have perished, giving rise to the conjecture that the plant is insectivorous, and the pitcher-shaped leaf furnished with hairs for the purpose of entrapping its prey, which, having entered, the stiff hairs with which the surface is armed prevent them from crawling out. Found in the swamp near Penn's Neck, east of Princeton, in M., near Freehold.

Found in Camden. (*W. M. Canby.*) Throughout the middle, south, and north-eastern parts of the State.

Order 8. PAPAVERACEÆ. Poppy Family.

Argemone, L. (Prickly Poppy.)

A. Mexicana, L. Waste places, not common. (Adv. Tropics.)

Chelidonium, L. (Celandine.)

C. majus, L. Waste grounds, near dwellings. Abundant in the middle and north. (Adv. Eu.)

Sanguinaria, Dill. (Blood-root.)

S. Canadensis, L. This is one of the most charming of the early spring flowers. It has a pure white flower and a leaf easily pressed and preserved in its natural shape.

When the root is broken or cut, a red juice issues from the wound, whence the name. Upper parts of M., Princeton, and north.

Glaucium, Tournefort.

G. luteum, Scop. Princeton, rare. (Adv. Eu.)

Order 9. FUMARIACEÆ. Fumitory Family.

Adlumia, Raf. (Climbing Fumitory.)

A. cirrhosa, Raf. Belvidere. (*Knighton.*) Palisades. (*T. C. B.*)

Dicentra, Bork. (Dutchman's Breeches.)

D. Cucullaria, DC. On rocks. Sparingly throughout the north.

D. Canadensis, DC. Mountains of Sussex Co. (*Austin.*)

D. eximia, DC. Delaware Water Gap. (*Austin.*)

Corydalis, Vent. (Corydalis.)

C. aurea, Willd. Princeton, Mer.

C. glauca, Pursh. On rocks, frequent north.

Fumaria, L. (Fumitory.)

F. officinalis, L. Princeton and Hightstown, Mer., not common. (Adv. Eu.)

Order 10. CRUCIFERÆ. Mustard Family.

Nasturtium, R. Br. (Water-Cress.)

N. Sylvestre, R. Br. Banks of Delaware, Camden Co. (*Redfield* and *Parker.*) (Nat. Eu.)

N. palustre, DC.

Var. hispidum. Hackensack meadows. (*T. C. B.*)

N. Armoracia, Fries. (Horse-radish.) Banks of streams and damp soil, not rare. (Nat. Eu.)

Dentaria, L. (Toothwort—Pepper-root.)

D. diphylla, L. East of Norwood, sparingly. Common in Sussex Co. (*Austin.*)

D. laciniata, Muhl. Freehold, M., not common. Weehawken. (*Austin.*) Camden. (*Canby.*)

Cardamine, L. (Bitter Cress.)

C. rhomboidea, DC. Wet meadows and springs. Middle and south; also near New York. (*Leggett.*)

C. rotundifolia, Michx. Cool, shaded springs, Middletown, Freehold, M., very rare. (*Knieskern.*)

C. pratensis, L. New Durham, not common. (*T. C. B.*)
C. hirsuta, L. Throughout.
Var. sylvatica, Gray. Palisades and Hoboken. (*T. C. B.*)

Arabis, L. (Rock Cress.)

A. lyrata, L. Shady rocks, not common. Sometimes in sand.
A. hirsuta, Scop. Mer., near Hightstown.
A. lævigata, DC. Common.
A. Canadensis, L. Common.

Barbarea, R. Br. (Winter Cress.)

B. vulgaris, R. Br. Very showy, common in damp cultivated fields.

Erysimum, L.

E. cheiranthoides, L. Banks of the Hackensack. (*Austin.*)

Sisymbrium, L. (Hedge Mustard.)

S. officinale, Scop. About dwellings, not rare. (Nat. Eu.)
S. Thaliana, Gaud. Belvidere. (*Knighton.*) Atlantic Co. (*Redfield.*)
S. canescens, Nutt. Cape May. (*Austin.*)

Brassica, Tourn.

B. alba, L. (White Mustard.) Waste places, rare. (Adv. Eu.)
B. sinapistrum, Boissier. (English Charlock.) Common in cultivated fields and about gardens. (Adv. Eu.)
B. nigra, L. (Black Mustard.) Fields and waste places ; furnishes the mustard of our tables, common near dwellings. (Adv. Eu.)

Draba, L. (Whitlow-Grass.)

D. Caroliniana, Walt. Camden. (*Canby.*)
D. verna, L. Sandy fields and waste places, common.

Camelina, Crantz. (False Flax.)

C. sativa, Crantz. Cultivated fields, not common. (Adv. Eu.)

Capsella, Vent. (Shepherd's Purse.)

C. Bursa-pastoris, Mœnch. Waste places and about dwellings. (Nat. Eu.)

Lepidium, L. (Pepperwort—Peppergrass.)

L. Virginicum, L. Roadsides and waste places, common.
L. Ruderale, L. Near New York. (*T. C. B.*)
L. campestre, L. Camden. (*Canby.*) (Nat. Eu.)

Cakile, Tourn. (Sea-Rocket.)

C. Americana, Nutt. Coast, Cape May, common. (*Canby.*)

Raphanus, L. (Radish.)

R. Raphanistrum, L. A troublesome weed, M., Atlantic City. (*Redfield.*) (Adv. Eu.)

Order 11. CAPPARIDACEÆ.

Polanisia, Raf.

P. graveolens, Raf. Long Branch. (*I. H. Hall.*)

Order 13. VIOLACEÆ. Violet Family.

Solea, Ging, DC.

S. concolor, Ging. Hunterdon. (*Porter.*)

Viola, L. (Violet—Heart's-ease.)

V. rotundifolia, Michx. Early leaves orbicular or reniform, later ones longer than broad, heart shaped, sparingly toothed, slightly crenate, 1–2 inches wide, 2–4 long, stalks pubescent, about as long as the blade.

Flowers pale yellow, middle-sized, side petals bearded, marked with dark lines, sometimes notched at the summit, stalks 1–3 inches long, generally smooth, occasionally pubescent.

Found sparingly in the north-eastern parts of the State. Closter and Stanhope. (*Austin.*) Morristown. (*Leggett.*) W. (*Porter.*)

V. lanceolata, L. (Lance-leaved Violet.) Quite smooth, lanceolate, tapering into a long petiole, obscurely toothed, or entire; leaves generally a little longer than the scapes; 4–6 in. high—flowers white, inodorous, striped with purple lines, spur short; sepals lanceolate; petals beardless. Common in damp meadows in the eastern part of Mer. and northern parts of M. April to June.

V. primulæfolia, L. Smooth, varying from cordate, broad ovate, to lanceolate, tapering into a winged petiole, slightly repand or crenate; when growing in dry places sparingly pubescent; sepals lanceolate; stigma beaked; flowers white, striped with purple streaks, slightly odorous; petals slightly bearded, especially the lateral ones. April to July. Wet meadows; growing with V. lanceolata and V. blanda, and seems to be a connecting link between them. I have seen specimens that seemed to possess the characteristics of both. Dr. Beck suggests that it may be identical with V. lanceolata, but my observations do not lead me to that conclusion. I should sooner take it to be a variety of V. blanda; its flowers are odorous like V. blanda; its foliage more nearly approaches that of V. blanda than of V. lanceolata, 4–6 in. high. Scattered sparingly over the entire limits of the three counties, M., O., and Mer.

V. blanda, Willd. Leaves cordate or sub-reniform, crenate or subentire, early ones sub-orbicular, with the head of the sinus rounded. Flowers white, odorous, and small; sepals ovate; petals ovate, obtuse, striped with purple. Common, growing in damp grounds. April to June. 3–5 in. high.

V. cucullata, Ait. Glabrous leaves cordate, cuculate at the base, serrate; toothed, distinctly nerved; radical ones sometimes sub-reniform or broad cordate; frequently purple on the under side near the base. Flowers blue, large, sepals linear, lanceolate; upper petal smooth, the others bearded, lateral ones, obovate. Spur short and rounded. Common throughout these limits, growing in wet grounds. March to July. 6–12 in. high.

Var. striata ; admits of the above description except that its flowers are lighter and striped with dark lines. 4–8 in. high, rare. I have seen but few specimens, and those were found in low ground about half a mile east of Freehold.

Var. palmata. Form No. 1. Leaves varying from broad cordate to reniform, repand toothed, sparingly cuculate at base ; whole plant slightly pubescent ; radical leaves, purple above. Growing in dry grounds and open woods. 6–10 in. high.

Form No. 2. Early leaves, broad cordate, or reniform, somewhat fleshy, on short petioles, under side frequently purple, serrate toothed, usually two or three in number, rarely many ; later leaves usually two to four in number, on long petioles, three lobed, the middle lobe sometimes lanceolate, occasionally with parallel sides, and terminating in a blunt angle, the lateral lobes hatchet-shaped, with the margins sometimes serrate toothed, sometimes deeply cut into two or three divisions. The whole leaf is frequently divided into narrow parts, approaching V. pedata. Again, the whole margin will be made up of divisions, varying in number from six to twelve, and from an eighth to half an inch in width, the middle one generally the broadest, and the incisions extending half way into the blade. The early leaves are usually smooth, the later ones covered with pubescence. Flowers apetalous and frequently subterranean. Growing abundantly about Freehold. Dry grounds and open woods. May to August. 6–12 in. high.

I watched this plant closely throughout three successive seasons in the same localities, and it seems to depart from the distinctive characters of V. cuculata as its distance from damp ground increases. I placed specimens with divided leaves in the lawn of the Freehold Institute, in damp, rich soil, and in the course of four years they were free from pubescence, the leaves entire, and in every way identical with V. cuculata growing within ten feet of it. I also saw specimens which had been transplanted into a dry, gravelly, rather sterile border, in Flushing, on Long Island, and they retained their pubescence and divided leaves.

V. sagittata, Ait. Leaf entirely smooth, when growing in damp soil; slightly pubescent when growing in dry soil. Sub-linear, lanceolate ; sometimes triangular ; sparingly toothed or cut-toothed at the base. 4–10 in. high. Flower deep blue ; petals obovate, and emarginate ; sepals lanceolate, acute, growing abundant about Lawrenceville; scattered sparingly over the entire limits. April to July.

Var. ovata, Nutt. Leaves oblong-ovate, crenate, repand toothed near the base; pubescent; stipules ciliate; flowers large and dark. Growing in dry, open woods; sandy soil. Abundant in M. April to May. 2–4 in. high.

Var. emarginata, Le Conte, I have not detected in these limits.

V. pedata, L. Leaves pedate, 5 to 9 parted, segment linear, sub-lanceolate ; middle segments frequently toothed. Flowers large, pale blue, conspicuous. This beautiful species is so distinct as to require a very brief description. It abounds in M. Its flowers are the largest and most showy of all the species found in the State.

Var. bicolor, Gray. A very showy variety. Dr. Gray describes it as a very handsome variety. The two upper petals deep violet and velvety, like a pansy. Marble Hill near Phillipsburg. (*Porter.*)

V. canina, L. Stem slender, much branched; leaves smooth, subreniform, or broad, cordate, crenate, serrate. 4–12 in. high. Growing in damp meadows. Abundant about Freehold.

V. rostrata, Pursh. Stems several, ascending, tapering 3–5 inches high; stipules large, lance shape, serrate, ciliate; leaves heart shaped, flat, 1–2 inches wide, occasionally wider; upper ones narrow, acute, and serrate. Flowers pale blue, petals marked with dark purple lines, peduncles longer than the leaves, spur very long, frequently much longer than the flower. General appearance of the plant like that of **V.** canina.

Found sparingly in the northern parts of the State; Marble Hill, near Phillipsburg. (*Porter.*) Hemlock Falls, S. Orange. (*Leggett.*) Montclair. (*Wm. Churchhill.*)

V. Canadensis, L. Stemmed; leaves cordate, somewhat acuminate, serrate; stipules broad, lanceolate; spur short. Flowers pale blue or white; petals marked with blue lines. Stem, 12–18 in. high. Damp woods, northern part of the State. (*Knighton.*)

V. pubescens, Ait. Covered with a soft pubescence; leaves few, broad, cordate, toothed near the summit of the stem, varying from 1–3 in. broad. Flowers, pale yellow. Shady woods and copses. Found sparingly throughout the middle counties. A form of this species is found at Cream Ridge, in M., with unusually large orbicular leaves, growing on a hill-side, over red shale.

V. tricolor, L. Stem leafy, angled; leaves, ovate, cordate; stipules lacinately toothed. Stem much branched. Flowers variegated. This is undoubtedly a variety of the cultivated pansy, escaped from gardens. Found in the fields near Trenton, not common. I have never seen it growing without cultivation in any other locality in the State. (Nat. Eu.)

Var. arvensis. Petals about the length of calix, otherwise not different from the species.

Order 14. CISTACEÆ. Rock-Rose Family.

Helianthemum, Tourn. (Rock-rose.)

H. Canadense, Michx. Sandy or dry gravelly soil.

H. corymbosum, Michx. Sandy or barren soil near the coast, not as common as the last.

Hudsonia, L. (Hudsonia.)

H. ericoides, L. Dry pine barrens, quite common in O. and M.

H. tomentosa, Nutt. Dry sandy coast and occasionally several miles inland, common in O.

Lechea, L. (Pinweed.)

L. major, Michx. Barren sandy fields, common.

L. thymifolia, Pursh. Barren sandy fields one mile west of Good-Luck Meadows, near Toms River, O., rare.

L. Novæ Cæsareæ, C. F. Austin. Closter. (*Austin.*) Pines. (*Canby.*)

L. minor, Lam. Dry open woods and road-sides.

Order 15. **DROSERACEÆ.** Sundew Family.

Drosera, L. (Sundew.)

D. rotundifolia, L. Peat-bogs, common.

D. longifolia, L. Peat-bogs, common.

D. filiformis, Raf. Peat-bogs or wet sandy soil, neglected roads. These three species are frequently found growing within the space of a few feet of each other.

Order 16. **HYPERICACEÆ.** St. John's-wort Family.

Ascyrum, L. (St. Peter's-wort.)

A. stans, Michx. Borders of thickets, pine-barrens, common.

A. Crux-Andreæ, L. Hill-sides and thickets, common.

Hypericum, L. (St. John's-wort.)

H. pyramidatum, Ait. On the Delaware. (*Porter.*)

H. prolificum, L. Swamps in pine barrens, Manchester, O., common.

Var. densiflorum, Gray. With the above, O., common.

H. adpressum, Barton. Mer., near Freehold. Closter. (*Austin.*)

H. angulosum, Michx. Wet pine-barrens, not common.

H. perforatum, L. Pastures and meadows, frequent. (Nat. Eu.)

H. corymbosum, Muhl. Damp or shady places, not common.

H. mutilum, L. Low grounds, common everywhere.

H. Canadense, L. Wet sandy places, common.

H. Sarothra, Michx. Both wet and dry sandy fields, common.

Elodes, Adans. (Marsh St. John's-wort.)

E. Virginica, Nutt. In sandy swamps, common.

Order 17. **ELATINACEÆ.** Water-wort Family.

Elatine, L. (Water-wort.)

E. Americana, Arnott. Damp places.

Order 18. **CARYOPHYLLACEÆ.** Pink Family.

Saponaria, L. (Soap-wort.)

S. officinalis, L. (Soap-wort—Bouncing Bet.) This very showy and really pretty plant, in spite of the neglect with which it meets, adorns the road-sides, near dwellings, all over the middle parts of the State Introduced from Europe and escaped from gardens.

Vaccaria, Medik. (Cow-Herb.)

V. vulgaris, Host. Partly naturalized, rare.

Silene, L. (Catchfly—Campion.)

S. stellata, Ait. Banks of Shark River, M. Common north.

S. inflata, Smith. Closter; rare. (*Austin.*) (Nat. Eu.)

S. Pennsylvanica, Michx. Sandy woods, not common.

S. Virginica, L. Near Camden. (*Canby.*) Warren. (*Knighton.*)

S. Armeria, L. Mer. (*Dr. Torrey.*) Road-sides, rare. (Adv. Eu.)

S. antirrhina, L. Dry soils, barren sandy fields, and rocks, frequent. (*Austin.*)

S. noctiflora, L. Warren. (*Knighton.*) (Nat. Eu.)

Lychnis, Tourn. (Lychnis—Cockle.)

L. Githago, Lam. Grain-fields, common. (Adv. Eu.)

Arenaria, L. (Sand-wort.)

A. serpyllifolia, L. Sandy waste places, not rare. (Nat. Eu.)

A. squarrosa, Michx. Near sea-coast, M.

A. stricta, Michx. Hun. (*Porter.*)

A. lateriflora, L. Budd's Lake, Mor. (*Porter.*) Closter. (*T. C. B.*)

A. peploides, L. (Honkenya peploides, Ehrh.) Sandy sea-beach, not rare. Atlantic City. (*Canby.*)

Stellaria, L. (Chickweed—Star-wort.)

S. media, Smith. Fields and around houses, common. (Nat. Eu.)

S. pubera, Michx. Middle and southern, not rare.

S. longifolia, Muhl. Mer. Throughout.

Holosteum, L.

H. umbellatum, L. Morris Co. (*Austin.*) (Nat. Eu.)

Cerastium, L. (Mouse-ear—Chickweed.)

C. vulgatum, L. Grassy banks and shaded rocks. Northern Railroad. (*T. C. B.*) (Nat. Eu.)

C. viscosum, L. Grassy fields and copses, common. (Nat. Eu.)

C. nutans, Raf. Moist places and damp woods, common.

C. oblongifolium, Tourn. Palisades. (*T. C. B.*)

C. arvense, L. M. (*Dr. Torrey.*) W. (*Knighton.*) Fort Lee, and Palisades. (*T. C. B.*)

Sagina, L. (Pearl-wort.)

S. procumbens, L. Damp or springy places, not common.

S. apetala, L. Mer. and M. (*Dr. Torrey.*)

S. subulata, Wimmer.

Var. Smithii, Gray. Sommers Point. (*C. E. Smith.*)

Spergularia, Pers. (Sand-Spurrey.)

S. rubra, Pers. Sandy soil near the coast, common.
Var. marina, Gray. Sea-coast, common.
S. media, Presl.
Var. macrocarpa, Gray. Hoboken. (*T. C. B.*)

Spergula, L. (Spurrey.)

S. arvensis, L. Grain fields, common in O. (*Knieskern.*) (Adv. Eu.)

Anychia, Michx. (Forked Chickweed.)

A. dichotoma, Michx. In dry and also moist soil, common north.

Scleranthus, L. (Knawel.)

S. annuus, L. Sandy waste places, not rare. (Nat. Eu.)

Mollugo, L. (Indian Chickweed.)

M. verticillata, L. Sandy river banks and cultivated grounds: in gardens, a troublesome weed, common. (Nat. from south.)

Order 19. PORTULACACEÆ. Purslane Family.

Sesuvium, L. (Sea Purslane.)

S. Portulacastrum, L. On the coast, rare. (*Knieskern.*)
S. pentandrum, Ell. (*Meriam.*)

Mr. Merriam thinks S. Portulacastrum is not found in New Jersey, and shows that the specimens found along the coast are S. pentandrum.

Portulaca, Tourn. (Purslane.)

P. oleracea, L. Cultivated grounds and gardens, common. (Nat. Eu.)

Claytonia, L. (Spring Beauty.)

C. Virginica, L. This little plant is one of the most delicate and beautiful of the early spring flowers found throughout the middle counties; growing in the borders of damp woods, especially in southern exposures. Appearing in April. The flowers are of a rose tint, with darkish veins. Leaves long, lance shaped. Shady copses.

Order 20. MALVACEÆ. Mallow Family.

Althæa, L. (Marsh-Mallow.)

A. officinalis, L. Salt marshes, also about mill-ponds inland. (Nat. Eu.)

Malva, L. (Mallow.)

M. rotundifolia, L. Door-yards and waste places, common. (Nat. Eu.)
M. sylvestris, L. Way-sides, rather rare. (Adv. Eu.)
M. moschata, L. Sussex Co. (*Austin.*) (Adv. Eu.)

Sida, L. (Sida.)

S. spinosa, L. Waste places, near New Egypt, O., frequent. (Nat. Tropical Amer.)

Abutilon, Tourn. (Indian Mallow—Velvet Leaf.)

A. Avicennæ, Gærtn. Waste places, a vile weed, common. (Nat. India.)

Kosteletzkya, Presl. (Kosteletzkya.)

K. Virginica, Presl. Marshes, on the coast, rather rare. Cape May. (*Canby.*)

Hibiscus, L. (Rose-Mallow.)

H. Moscheutos, L. Banks of rivers, not rare on the coast and near Trenton.

H. Trionum, L. Escaped from gardens, not common. (Adv. Eu.)

Order 21. **TILIACEÆ.** Linden Family.

Tilia, L. (Linden—Basswood—Lime Tree.)

T. Americana, L. This is a graceful tree used for ornamental purposes, and found in the streets of the villages and in private grounds. I have never seen it in a wild state. Dr. Knieskern reports it as growing along the Manasquan River. Common in woods of W. (*Knighton.*)

Var. pubescens, Gray. High hills, Weehawken. (*T. C. B.*)

Order 23. **LINACEÆ.** Flax Family.

Linum, L. (Flax.)

L. Virginianum, L. Dry woods, frequent.

L. striatum, Walt. Pines. (*Canby.*) Low grounds, Closter. (*T. C. B.*)

L. sulcatum, Riddell. (*T. C. B.*)

Order 24. **GERANIACEÆ.** Geranium Family.

Geranium, L. (Cranesbill.)

G. maculatum, L. (Spotted Cranesbill.) This species is common in the middle counties. Leaves spotted, on long petioles; stems erect, bearing an abundance of large, showy, purple flowers. The plant is far more showy and beautiful than some of the cultivated varieties. Endures cultivation well. Throughout.

G. Carolinianum, L. Barren soil and waste places, common.

G. columbinum, L. Chatham. (*T. C. B.*) (Nat. Eu.)

G. pucillum, L. Camden. (*Porter.*) (Nat. Eu.)

G. Robertianum, L. Chatham, and on the Palisades, common. (*T. C. B.*)

Erodium, L'Her. (Storksbill.)

E. cicutarium, L'Her. Woodbury. (*Canby.*) (Adv. Eu.)

Fœrkea, Willd.

F. proserpinacoides, Willd. Pascack and Closter. (*T. C. B.*)

Impatiens, L. (Balsam—Jewel-weed.)

I. pallida, Nutt. Shady, moist ravines, common.

I. fulva, Nutt. Moist places, common.

Var. alba. Near Toms River, O., has white flowers, not common. (*Knieskern.*)

Oxalis, L. (Wood-Sorrel—Sheep-Sorrel.)

O. violacea, L. Sparingly throughout.

O. stricta, L. Woods and fields, common.

Order 25. **RUTACEÆ.** Rue Family.

Zanthoxylum, Colden. (Prickly Ash.)

Z. Americanum, Mill. M., near Freehold ; also at Closter. (*T. C. B.*)

Order 26. **ANACARDIACEÆ.** Cashew Family.

Rhus, L. (Sumach.)

R. typhina, L. Common north.

R. glabra, L. This species is common throughout the middle and northern parts of the State. The fruit has a pleasant acid, a decoction of which is used as a gargle for ulcerated sore throat. The leaves and bark are used for tanning goat-skins, and make the best morocco.

R. copallina, L. Neglected fields and road-sides, common.

R. venenata, DC. (Poison Sumach—Poison Elder—Poison Dogwood.) Is a small tree, from eight to twenty feet high. The poisonous effects of this species are sometimes very severe. Common ; growing in swampy places throughout the State.

R. Toxicodendron, L. (Poison Vine—Poison Ivy—Poison Oak.) This plant is a vine, fastening itself to the trunks of trees, or to rocks, by numerous rootlets thrown out all along the stem. The leaves are three parted, the parts ovate. It is to be avoided, as it is poisonous to most persons, causing an eruption of the skin, accompanied by an intolerable itching and burning sensation. Low meadows, fence-rows, and thickets, common.

Order 27. **VITACEÆ.** Vine Family.

Vitis, Tourn. (Grape.)

V. labrusca, L. Thickets, and along fences, common. Isabella, Catawba, and Concord are cultivated varieties of this species.

V. æstivalis, Michx. Thickets, common.
V. cordifolia, Michx. River banks and thickets, common.
Var. riparia, Michx. Palisades. (*T. C. B.*)

Ampelopsis, Michx. (Virginian Creeper—American Ivy.)

A. quinquefolia, Michx. Great climber. Leaves five parted. Woods, and along fences. In rich, damp soils, common. Bears cultivation well.

Order 28. **RHAMNACEÆ.** Buckthorn Family.

Rhamnus, Tourn.

R. alnifolius, L'Her. Ditches, near Durham Swamp. (*T. C. B.*)

Frangula, Tourn. (Alder—Buckthorn.)

F. Caroliniana, Gray. New Durham. (*T. C. B.*)

Ceanothus, L. (New Jersey Tea—Red-root.)

C. Americanus, L. This shrub bears cultivation ; it is said to have derived its name of New Jersey Tea from the circumstance that in early times the dried leaves were used for tea. Dry open woods and borders of fields and copses, common.

Order 29. **CELASTRACEÆ.** Staff-tree Family.

Celastrus, L. (Staff-tree—Shrubby Bitter-sweet.)

C. scandens, L. Common in the north.

Euonymus, Tourn. (Spindle-tree.)

E. atropurpureus, Jacq. (Burning-Bush.) Not rare.
E. Americanus, L. About Freehold, M.

Order 30. **SAPINDACEÆ.** Soapberry Family.

Staphylea, L. (Bladder-Nut.)

S. trifolia, L. Banks of Squan River, rare. Palisades. (*T. C. B.*)

Acer, Tourn. (Maple.)

A. Pennsylvanicum, L. High hill-sides. (*T. C. B.*) And especially in Sussex Co. (*Austin.*)

A. spicatum, Lam. (Mountain Maple.) Mountains of W. (*Knighton.*)

A. saccharinum, Wang. Middle and north. Used as an ornamental tree throughout the State.

A. dasycarpum, Ehrhart. Middle and north. Used for shade tree ; is a very rapid grower, and liable to be broken by high winds ; it also grows more straggling than the last.

A. rubrum, L. Swamps and wet woods, everywhere common.

Negundo, Mœnch. (Ash-leaved Maple—Box-Elder.)

N. aceroides, Mœnch. A very thrifty, rapid-growing tree; much used for a shade tree. Red Bank, M., and Paterson. (*T. C. B.*)

Order 31. **POLYGALACEÆ.** Milk-wort Family.

Polygala, Tourn. (Milk-wort.)

P. lutea, L. Low meadows and sandy swamps. Middle and south.
P. incarnata, L. Haddonfield. (*Canby.*)
P. sanguinea, L. Damp meadows, not rare.
P. fastigiata, Nutt. Pine barrens, O., not common.
P. Nuttallii, Torr. and Gr. Pines. (*Canby.*)
P. cruciata, L. Margins of swamps, common in middle counties.
P. brevifolia, Nutt. Along fences and in grain stubbles; in M., not common. Pines. (*Canby.*)
P. verticillata, L. Dry soil, common.
P. ambigua, Nutt. Damp fields, common.
P. Senega, L. Woods and hill-sides. (*T. C. B.*)
P. polygama, Walt. Dry, sandy soil, rare.
P. paucifolia, Willd. Near Freehold, and north.

Order 32. **LEGUMINOSÆ.** Pulse Family

Lupinus, Tourn. (Lupine.)

L. perennis, L. Sandy fields and woods. Throughout.

Crotalaria, L. (Rattle-box.)

C. sagittalis, L. Sandy soil, common.

Trifolium, L. (Clover—Trefoil.)

T. arvense, L. Barren, dry, sandy fields, common. (Nat. Eu.)
T. pratense, L. Cultivated for hay and pasture, common. (Adv. Eu.)
T. repens, L. Pastures, meadows, etc., common.
T. agrarium, L. Hightstown, Mer., not common. (Nat. Eu.)
T. procumbens, L. Freehold, road-sides, and borders of fields, M. (Nat. Eu.)

Melilotus, Tourn. (Melilot—Sweet Clover.)

M. officinalis, Willd. Hightstown and Freehold, Mer. and M., about dwellings. (Adv. Eu.)
M. alba, Lam. About dwellings. (Adv. Eu.)

Medicago, L. (Medick.)

M. lupulina, L. Waste places and road-sides, frequent. (Adv. Eu.)

Robinia, L. (Locust-tree.)

R. Pseudacacia, L. Escaped from cultivation. Cultivated for its valuable timber. (Adv. Penn. and west.)

R. viscosa, Vent. Princeton, Mer. Escaped, not common. (Adv. Va.)

Tephrosia, Pers. (Hoary Pea.)

T. Virginiana, Pers. Dry, sandy soil, frequent.

Desmodium, DC. (Tick-Trefoil.)

D. nudiflorum, DC. Dry woods. Common north.

D. acuminatum, DC. Copses and fence-rows, as well as damp woods. Middle and north. Palisades. (*T. C. B.*)

D. rotundifolium, DC. Dry, sandy fields, O., rare. Common in Mer. and M.

D. canescens, DC. Common in the middle and north.

D. cuspidatum, Torr. and Gr. Not rare.

D. lævigatum, DC. Pines of O., and low country, not common ; also Bergen Point and Chatham. (*T. C. B.*)

D. viridiflorum, Beck. (*T. C. B.*) Belvidere. (*Knighton.*)

D. Dillenii, Darlington. Open, sandy woods, O , common.

D. paniculatum, DC. Copses and borders of woods, common.

D. strictum, DC. Pine woods and neglected fields, low country, rare.

D. Canadense, DC. Borders of woods, not rare.

D. ciliare, DC. Low country.

D. Marilandicum, Boott. Copses and open woods, common.

Lespedeza, Michx. (Bush-Clover.)

L. procumbens, Michx. Sandy soil, not rare.

L. repens, Torr. and Gray. Dry, sandy fields and open woods, frequent.

L. violacea, Pers. This species and its varieties are common.

L. Stuvei, Nutt. Along fences on hill-sides, M., common.

L. hirta, Ell. Dry, sandy, barren fields and hill-sides, common.

L. capitata, Michx. Dry, sandy or gravelly fields and hill-sides, common.

Var. Angustifolia, Gray. Low country. Common.

Stylosanthes, Swartz. (Pencil-Flower.)

S. elatior, Swartz. Dry, sandy road-sides. Frequent in the middle counties ; common south.

Vicia, Tourn. (Vetch—Tare.)

V. sativa, L. Cultivated fields, common. (Adv. Eu.)

V. tetrasperma, L. Hoboken. (*T. C. B.*) Keyport, M. (*S. Lockwood.*) (Nat. Eu.)

V. hirsuta, Koch. About dwellings in eastern M., common. (Nat. Eu.)

V. Cracca, L. W. (*Knighton.*)

V. Caroliniana, Walt. Hunt. (*Porter.*)

V. Americana, Muhl. North ; rather common.

Lathyrus, L.

L. maritimus, Bigelow. Middle and coast.
L. palustris, L. New Durham. (*Austin.*)
Var. myrtifolius, Gray. Hackensack marshes. (*T. C. B.*)

Apios, Boerh. (Ground-nut—Wild Bean.)

A. tuberosa, Mœnch. Moist thickets, common.

Phaseolus, L. (Kidney Bean.)

P. perennis, Walt. W. (*Knighton.*)
P. diversifolius, Pers. Sand-hills, sea-coast, rare.
P. helvolus, L. Sandy fields and low country, common.

Clitoria, L. (Butterfly-Pea.)

C. Mariana, L. High banks, Tom's River, O., rare. (*Knieskern.*)

Amphicarpæa, Ell. (Hog Peanut.)

A. monoica, Nutt. Common.

Galactia, P. Browne. (Milk-Pea.)

G. glabella, Michx. Pines, common. (*Canby.*)

Baptisia, Vent. (False Indigo.)

B. tinctoria, R. Br. Dry, sandy soil, common.

Cercis, L.

C. Canadensis, L. Woods. (*T. C. B.*) This is given in the Bulletin on authority of Torrey's Catalogue.

Cassia, L. (Senna.)

C. Marilandica, L. Alluvial soil, not common. The leaves are sometimes used as a purgative medicine. M.
C. Chamæcrista, L. Sandy fields, common.
C. nictitans, L. Sandy fields and road-sides, common. The leaves of the last two species are sensitive to touch.

Gleditschia, L. (Honey-Locust.)

G. triacanthos, L. Escaped from cultivation. (Adv. south-west.)

Order 33. **ROSACEÆ.** Rose Family.

Prunus, Tourn. (Plum, Cherry, etc.)

P. Americana, Marshall. Banks of streams. Camden. (*Canby.*) Frequent north.
P. maritima, Wang. Near sea-beach, sandy, open woods, common south.

P. spinosa, L. Orange and W. (*Knighton.*) (Adv. Eu.)

P. pumila, L. W. (*Knighton.*)

P. Pennsylvanica, L. Weehawken heights. (*I. H. Hall.*) W. (*Knighton.*)

P. Virginiana, L. North.

P. serotina, Ehrhart. Upland, common.

Spiræa, L. (Meadow-Sweet.)

S. opulifolia, L. Cultivated about dwellings, common north-west.

S. corymbosa. Near Chester, Mor. (*Austin.*) (Adv. south-west.)

S. salicifolia, L. (White Spiræa—Meadow-Sweet—Willow-leaved Spiræa.) This species is frequently found growing with the next, though it likes wetter places. Its flowers are white, and the leaves resemble the leaves of willow. Flowers from June to September. This species, with the next, which grows about three feet high, bears cultivation.

S. tomentosa, L. (Hardhack—Steeple-Bush—Downy Spiræa.) This species is easily distinguished from all others on account of its wrinkled leaves and its pyramid-shaped masses of flowers, with which the summits of its stems and branches are crowned. The last year's fruit-vessels appear among the flowers. Flowers purple, appearing in June, July, and August. A tea made of the leaves is said to be a remedy for dysentery. In M. and Mer., frequent throughout.

Gillenia, Mœnch. (Indian Physic.)

G. trifoliata, Mœnch. Hill-sides in the north.

Poterium, L. (Burnet.)

P. Canadense, Gray. Freehold, and about Hightstown, common north.

Agrimonia, Tourn. (Agrimony.)

A. Eupatoria, L. Borders of woods, rare in the middle counties; common north.

A. parviflora, Ait. Closter, common. (*Austin.*)

Geum, L. (Avens.)

G. album, Gmelin. Frequent in the middle counties.

G. Virginianum, L. Freehold, M. Common north.

G. strictum, Ait. Damp, shady places and meadows, not common.

G. rivale, L. Near Closter and in Sussex. (*Austin.*)

Waldsteinia, Willd.

W. fragarioides, Tratt. W. and Sus.

Potentilla, L. (Cinque-foil—Five-finger.)

P. Norvegica, L. Cultivated fields, not common in the middle counties; frequent in W. (*Knighton.*)

P. Canadensis, L. (Cinque-foil — Five-finger — False Strawberry.) This little plant always attracts the attention of young botanists. It varies very much in form, so that beginners usually make several species of it during the season. It resembles the field strawberry in general appearance. When found in dry, barren fields, it is small, simple, and thickly sprinkled with silky hairs ; when growing in damp, rich fence-rows it is less hairy, and sends off many runners, rooting and flowering along the runners. The plant in damp, rich soil forms the *Var.* simplex. Torr. and Gr.

P. argentea, L. W. (*Knighton.*) Camden. (*Canby.*)

P. fruticosa, L. In damp places. (*Dr. Torrey.*) Also north. (*Austin.*)

P. arguta, Pursh. On the Delaware below Phillipsburg. (*Porter.*) Also Budd's Lake. (*T. C. B.*)

P. Anserina, L. Shores of Newark Bay. (*T. C. B.*)

P. tridentata, Ait. Top of High Point, Sussex Co. (*Austin.*)

P. palustris, Scop. Budd's Lake. (*Porter.*)

Fragaria, Tourn. (Strawberry.)

F. Virginiana, Ehrhart. Fields and open woods, common.

F. vesca, L. Shaded rocky banks. North.

F. Indica, L. Weehawken. (*Ruger.*) O. (*Austin.*) (Adv. India.)

Rubus, Tourn. (Bramble.)

R. odoratus, L. Purple-flowering Raspberry. North.

R. triflorus, Richardson. M. (*Dr. Torrey.*)

R. strigosus, Michx. Extreme north.

R. occidentalis, L. Freehold, M., common in wood-sides and pastures.

R. villosus, Ait. Borders of thickets, fields, etc., common.

R. Canadensis, L. Sandy fields, very troublesome, common.

R. hispidus, L. Low woods and swamps, common.

R. cuneifolius, Pursh. Sandy fields. Middle and south, common.

Rosa, Tourn. (Rose.)

R. Carolina, L. Swamps and low grounds, common.

R. lucida, Ehrhart. Dry soils and neglected fields. Middle ; common.

R. blanda, Ait. Damp meadows, Freehold, not common.

R. rubiginosa, L. Thickets and road-sides, common. (Nat. Eu.)

R. micrantha, Smith. Hoboken. (*Austin.*) (Adv. Eu.)

Cratægus, L. (Hawthorn—White Tree.)

C. Oxycantha, L. W. (*Knighton.*) H. (*Austin.*) (Adv. Eu.)

C. coccinea, L. Thickets and banks, not rare.

C. tomentosa, L.

Var. punctata, Jacq. North.

C. Crus-galli, L. Thickets, not rare.

C. parvifolia, Ait. Pine barrens, O. Palisades. (*Austin.*) Frequent south. (*Canby.*)

Pyrus, L. (Pear—Apple.)

P. coronaria, L. Sparingly in the north-west. (*Austin.*)

P. arbutifolia, L. Borders of swamps, not rare.

Var. erythrocarpa. Common south. (*Canby.*)

Var. melanocarpa, Gray. Damp thickets, common in M. and O.

P. Americana, DC. Budd's Lake, Mor. (*Porter.*)

Amelanchier, Medic. (June-berry.)

A. Canadensis, Torr. and Gray. (Shad-bush.) This is a very early plant in these borders, and forms a striking object early in April, as it appears in full flower before the surrounding trees have put on their leaves. The tree most common in this part of the State is the *Var.* Botryapium, which is a second-class tree. The other varieties are shrubs.

Var. Botryapium. Common in the middle and north.

Var. oblongifolia. Camden; common. (*Canby.*)

Order 35. SAXIFRAGACEÆ. Saxifrage Family.

Ribes, L. (Currant—Gooseberry.)

R. Cynosbati, L. Closter and Preakness. (*T. C. B.*) Also north.

R. hirtellum, Michx. Closter. (*Austin.*)

R. rotundifolium, Michx. Bergen Co. (*T. C. B.*) W. (*Knighton.*)

R. prostratum, L'Her. Closter. (*Austin.*)

R. floridum, L. Princeton. (*Dr. Torrey.*) W. (*Knighton.*) Mor. (*Austin.*)

R. rubrum, L. New Durham swamp and Mor. (*T. C. B.*)

Itea, L. (Itea.)

I. Virginica, L. Swamps, low country, not rare.

Hydrangea, Gronov.

H. arborescens, L. Northern parts of the State. Along the Delaware; rather common. (*Porter.*)

Parnassia, Tourn. (Grass of Parnassus.)

P. Caroliniana, Michx. Marl banks, New Egypt, O., rare; common about Closter. (*Austin.*)

Saxifraga, L. (Saxifrage.)

S. Virginiensis, Michx. Dry banks; rare in the middle counties; common north.

S. Pennsylvanica, L. Common throughout the north.

Heuchera, L. (Alum-root.)

H. Americana, L. Shady banks, middle and north.

Mitella, Tourn. (Mitre-wort—Bishop's-Cap.)

M. diphylla, L. Closter and north-west.

Tiarella, L.

T. cordifolia, L. Passaic Falls. (*T. C. B.*)

Chrysosplenium, Tourn. (Golden Saxifrage.)

C. Americanum, Schweinitz. Cool, damp places, not rare.

ORDER 36. **CRASSULACEÆ.** ORPINE FAMILY.

Penthorum, Gronovius. (Dutch Stone-crop.)

P. sedoides, L. Throughout.

Sedum, Tourn. (Stone-crop—Orpine.)

S. ternatum, Mx. Road-sides, near Rockland. (*Austin.*)

S. telephioides, Mx. Not common. (*Gray.*)

S. Telephium, L. Near dwellings, not rare. (Adv. Eu.)

ORDER 37. **HAMAMELACEÆ.** WITCH-HAZEL FAMILY.

Hamamelis, L. (Witch-hazel.)

H. Virginica, L. Swamps and damp woods, frequent in the middle and north.

Liquidambar, L. (Sweet-Gum Tree.)

L. Styraciflua, L. (Sweet-Gum—Bilsted.) This tree demands a passing notice. Its bark presents a most remarkable roughness. Its leaves are large, glossy, and deeply lobed. It bears cultivation and is a most beautiful object in the lawn. In autumn it puts on a variety of shades, in which deep crimson predominates. In swamps and damp soil, common in the low country; sparingly in the north-east.

ORDER 38. **HALORAGEÆ.** WATER-MILFOIL FAMILY.

Myriophyllum, Vaill. (Water-Milfoil.)

M. scabratum, Michx. Quiet water, M., near Freehold. Cape May. (*Canby.*)

M. ambiguum, Nutt. In water, M., rare. South. (*Austin.*)

Proserpinaca, L. (Mermaid-weed.)

P. palustris, L. Common north.

P. pectinacea, Lam. Sandy swamps, Manchester, O.; also Atlantic City. (*Canby.*)

Order 39. ONAGRACEÆ. Evening-Primrose Family.

Circæa, Tourn. (Enchanter's Nightshade.)

C. Lutetiana, L. Damp places in copses, and borders of damp meadows, common.

Epilobium, L. (Willow-herb.)

E. angustifolium, L. (Great Willow-herb.) North, common.
E. palustre, L. Damp places. North ; rare.
Var. lineare, Gray. Budd's Lake. (*Porter.*) Closter. (*Austin.*)
E. molle, Torr. Chatham. (*T. C. B.*)
E. coloratum, Muhl. Wet places, common.

Œnothera, L. (Evening Primrose.)

Œ. biennis, L. Dry fields, very common.
Œ. sinuata, L. Old fields, M., and low country.
Œ. fruticosa, L. Open fields, common.
Œ. riparia, Nutt. Quaker Bridge, along streams. (*Dr. Gray.*)
Œ. linearis, Michx. Camden. (*Canby.*)
Œ. chrysantha, Michx. Mer. (*Dr. Torrey.*)
Œ. pumila, L. M. (*Dr. Torrey.*) Frequent north. (*Austin.*)

Ludwigia, L. (False Loose-strife.)

L. alternifolia, L. Swamps and damp places, common.
L. hirtella, Raf. Damp places among the pine forests of O. and M.
L. sphærocarpa, Ell. Low country, rare ; also Closter. (*Austin.*)
L. linearis, Walt. Wet places. Low country.
L. palustris, Ell. Ditches, common.

Order 40. MELASTOMACEÆ. Melastoma Family.

Rhexia, L. (Deer-Grass—Meadow-Beauty.)

R. Virginica, L. Sandy swamps, frequent, M., O., and north. (*Austin.*)
R. Mariana, L. Sandy swamps. Low country.

Order 41. LYTHRACEÆ. Loose-strife Family.

Ammannia, Houston.

A. humilis, Mx. Closter, rare. (*T. C. B.*) Damp grounds, near Camden. (*Parker.*)

Lythrum, L. (Loose-strife.)

L. Hyssopifolia, L. Along the sea-coast. (*Dr. Gray.*)
L. lineare, L. Borders of salt marshes in M., O., and Mid. Hackensack meadows. (*T. C. B.*)

L. Salicaria, L. Banks of the Delaware, Camden Co. (*Parker.*) Also Hudson Co., rare. (*Austin.*)

Nesæa, Commerson, Juss. (Swamp Loose-strife.)

N. verticillata, H. B. K. Swamps, common. Middle and north.

Cuphea, Jacq.

C. viscosissima, Jacq. Closter. (*Austin.*)

Order 43. CACTACEÆ. Cactus Family.

Opuntia, Tourn. (Prickly Pear—Indian Fig.)

O. vulgaris, Mill. Sandy fields, south. (*Canby.*)

O. Rafinesquii, Engelm. Dr. Porter, of Lafayette College, writes me that he thinks the Opuntia of New Jersey is not vulgaris, and doubts that O. vulgaris is found so far north. Dr. Engelmann writes me that specimens which he has seen from New Jersey are O. Rafinesquii. Dr. Gray writes that he does not doubt that O. vulgaris may be found in New Jersey. Dr. Torrey puts it down both in New Jersey and New York. Dr. Lockwood furnished me with specimens from the vicinity of Matawan, which I have growing, and which I am sure are O. Rafinesquii. Canby reports O. vulgaris in South Jersey.

Order 45. CUCURBITACEÆ. Gourd Family.

Sicyos, L. (One-seeded Star-Cucumber.)

S. angulatus, L. Waste shady places, not common.

Order 46. UMBELLIFERÆ. Parsley Family.

Hydrocotyle, Tourn. (Water Pennywort.)

H. Americana, L. Banks of Shark River, M., common north.

H. umbellata, L. Point Pleasant, O., and south, rare.

Var. ambigua. Cape May. (*Canby.*)

H. interrupta, Muhl. Cape May. (*Canby.*) Red Bank. (*T. C. B.*)

Sanicula, Tourn. (Sanicle—Black Snakeroot.)

S. Canadensis, L. Damp, rich woods, middle and north, common.

S. Marilandica, L. Middle and north, common.

Eryngium, Tourn. (Eryngo.)

E. yuccæfolium, Michx. Pine regions. (*Dr. Gray.*)

E. Virginianum, Lam. Tom's River, O., Squan Village, and south; rare.

Daucus, Tourn. (Carrot.)

D. Carota, L. Cultivated fields, too common. (Adv. Eu.)

Heracleum, L. (Cow-Parsnip.)

H. lanatum, Michx. Mer.; also at Hoboken. (*Dr. Torrey.*)

Pastinaca, Tourn. (Parsnip.)

P. sativa, L. Fields, near dwellings, too common. (Adv. Eu.)

Archemora, DC. (Cowbane.)

A. rigida, DC. Sandy swamps, common.

Archangelica, Hoffm. (Archangelica.)

A. hirsuta, Torr. and Gray. Dry, open woods, middle, frequent.

A. atropurpurea, Hoffm. Mer. (*Dr. Torrey.*) Frequent north.

Conioselinum, Fischer. (Hemlock Parsley.)

C. Canadense, Torrey and Gray. Closter, common. (*Austin.*)

Æthusa, L.

Æ. Cynapium, L. Palisades. (*T. C. B.*) (Adv. Eu.)

Thaspium, Nutt. (Meadow-Parsnip.)

T. barbinode, Nutt. Shady banks, Prospertown, O., about Princeton, Mer., rare.

T. aureum, Nutt. Banks of streams, Bergen Co. (*T. C. B.*)

T. trifoliatum, Gray. Long Hill. (*T. C. B.*) Common north.

Zizia, DC.

Z. integerrima, DC. English Neighborhood, and Palisades. (*T. C. B.*) Common north.

Var. atropurpureum. Torr. and Gr. Mer. (*Dr. Torrey.*)

Bupleurum, Tourn. (Thorough-wax.)

B. rotundifolium, L. Mer. (*Dr. Torrey.*) Woodbury. (*Canby.*) (Adv. Eu.)

Discopleura, DC. (Mock Bishop-weed.)

D. capillacea, DC. Swamps along the coast, frequent.

Cicuta, L. (Water-Hemlock.)

C. maculata, L. Damp meadows and banks of brooks. Middle and north.

C. bulbifera, L. Wet places. Frequent north.

Sium, L. (Water-Parsnip.)

S. lineare, Michx. M. (*Dr. Torrey.*)

Cryptotænia, DC. (Hone-wort.)

C. Canadensis, DC. Borders of woods about Freehold. Common north.

Chærophyllum, L.

C. procumbens, Lam. Hoboken Hills ; also South Jersey. (*Austin.*)

Osmorrhiza, Raf. (Sweet Cicely.)

O. longistylis, DC. Closter. (*Austin.*) Near Weehawken. (*Johnson.*)

O. brevistylis, DC. Rich woods, common in the middle and north.

Conium, L. (Poison Hemlock.)

C. maculatum, L. Mer. (*Dr. Torrey.*) Phillipsburg. (*Porter.*) Sussex. (*Austin.*) (Nat. Eu.)

Order 47. **ARALIACEÆ.** Ginseng Family.

Aralia, Tourn. (Ginseng—Wild Sarsaparilla.)

A. spinosa, L. Escaped.

A. racemosa, L. Bergen Co. (*T. C. B.*), and north.

A. hispida, Michx. Sandy pine barrens, and north. (*Knieskern.*)

A. nudicaulis, L. Shady thickets, M., common north.

A. trifolia, Gray. Woods near Freehold, M.; common north.

Order 48. **CORNACEÆ.** Dogwood Family.

Cornus, Tourn. (Cornel—Dogwood.)

C. Canadensis, L. Throughout.

C. florida, L. This, and all the species growing in the State, are beautiful plants and bear transplanting well. Copses and open woods, throughout.

C. circinata, L'Her. North.

C. sericea, L. Fence-rows and thickets.

C. stolonifera, Michx. Along streams and in swamps, M.; common north.

C. paniculata, L'Her. Along fence-rows.

C. alternifolia, L. Fence-rows and thickets. Common.

Nyssa, L. (Tupelo—Pepperidge—Sour-Gum Tree.)

N. multiflora, Wang. Damp soil, common throughout.

Order 49. **CAPRIFOLIACEÆ.** Honeysuckle Family.

Linnæa, Gronov.

L. borealis, Gronov. New Durham Swamp, rare. (*T. C. B.*) Of late years this plant has not been found in the State. It is supposed that Michaux planted it at New Durham, and that the locality is now exhausted.

Symphoricarpus, Dill. (Snowberry.)

S. racemosus, Michx. M. (*Dr. Torrey.*)

S. vulgaris, Michx. Mer. (*Dr. Torrey.*) Escaped from cultivation.

Lonicera, L. (Honeysuckle—Woodbine.)

L. sempervirens, Ait. Mer., near Princeton, and New Durham. (*T. C. B.*)

L. grata, Ait. W. (*Knighton.*) New Durham. (*Dr. Torrey.*)

L. parviflora, Lam. Bergen Co., common. (*T. C. B.*) North. (*Porter.*)

L. ciliata, Muhl. W. (*Knighton.*)

Diervilla, Tourn.

D. trifida, Mœnch. Long Hill. (*W. H. Leggett.*) Morris. (*Porter.*) Frequent north.

Triosteum, L. (Fever-wort—Horse-Gentian.

T. perfoliatum, L. Borders of woods, middle and north.

Sambucus, Tourn. (Elder.)

S. Canadensis, L. Rich soil, common.

S. pubens, Mx. Palisades. (*T. C. B.*)

Viburnum, L. (Arrow-wood—Lauristinus.)

V. Lentago, L. (Sheep-berry—Nanny-berry.) All the species in this genus make sightly objects for the lawn. Sparingly found throughout.

V. prunifolium, L. Fence-rows, frequent.

V. nudum, L. Sandy swamps, common.

V. dentatum, L. Wet places, common.

V. pubescens, Pursh. Hills near Princeton, and north.

V. acerifolium, L. Sparingly south ; common north, in damp woods.

Order 50. RUBIACEÆ. Madder Family.

Galium, L. (Bedstraw—Cleavers.)

G. Aparine, L. Damp woods.

G. asprellum, Michx. Shady places and damp woods.

G. trifidum, L. Damp places, common throughout.

G. triflorum, Michx. Rich woods, in middle and north, common.

G. pilosum, Ait. Dry, open woods, not rare.

G. circæzans, Michx. Damp, rich woods, common middle, and north.

G. lanceolatum, Torr. Near Freehold, M., and Hightstown, Mer. Frequent north.

G. boreale, L. Princeton, woods, Mer. (*Dr. Torrey.*) And rocky banks, north.

Diodia, L. (Button-weed.)

D. Virginica, L. Cape May. (*Parker.*)

D. teres, Walt. Sandy fields and road-sides, common.

Cephalanthus, L. (Button-bush.)

C. occidentalis, L. Banks of ponds and brooks, common.

Mitchella, L. (Partridge-berry.)

M. repens, L. Damp woods, frequent south. Common in the middle and north.

Oldenlandia, Plumier, L. (Oldenlandia.)

O. glomerata, Michx. Near Shark River, M. (*Knieskern.*) Manchester, O. (*Austin.*) Closter. (*T. C. B.*)

Houstonia, L. (Houstonia.)

H. purpurea, L. (*Dr. Torrey.*)

H. cærulea, L. Camden. (*Canby.*) Common in most places north.

Order 51. VALERIANACEÆ.

Fedia, Gærtn. (Corn Salad.)

F. olitoria. Canal banks, Trenton. (*Apgar.*) (Adv. Eu.)

Order 52. DIPSACEÆ. Teasel Family.

Dipsacus, Tourn. (Teasel.)

D. sylvestris, Mill. Road-sides, rare in the middle counties, but common in W. (*Knighton.*) (Nat. Eu.)

Order 53. COMPOSITÆ. Composite Family.

Vernonia, Schreb. (Iron-weed.)

V. Noveboracensis, Willd. Damp meadows, common.

Var. alba, with white flowers, near Freehold, M.

Sclerolepis, Cass. (Sclerolepis.)

S. verticillata, Cass. Pines. (*Canby.*)

Liatris, Schreb. (Button Snakeroot—Blazing-Star.)

L. spicata, Willd. Salt meadows, near Squan, M., Point Pleasant, O., rare; also sparingly north.

L. graminifolia, Willd. Near Keyport, M.

Var. dubia, Gray. Damp pine barrens, low country, not rare.

Kuhnia, L. (Kuhnia.)

K. eupatorioides, L. Camden. (*Canby.*) Swamps, common north. (*Austin.*)

Eupatorium, Tourn. (Thoroughwort.)

E. purpureum, L. Low grounds, common.
E. hyssopifolium, L. Damp thickets, low country.
E. leucolepis, Torr. and Gray. Low country.
E. album, L. Dry and sandy fields, not rare.
E. teucrifolium, Willd. Low grounds, common, especially south.
E. rotundifolium, L. Dry soil, common in the middle and south.
E. pubescens, Muhl. Borders of salt meadows, M. and south.
E. sessilifolium, L. Edges of woods.
E. resinosum, Torr. Damp pine barrens, near Manchester, O., and about Freehold, M., and south, rare.
E. perfoliatum, L. Low grounds, common.
E. ageratoides, L. Damp wood borders, middle and north.
E. aromaticum, L. Near Squan Village, and about Freehold, rare.

Mikania, Willd. (Climbing Hemp-weed.)

M. scandens, L. Shady copses, wet places, common.

Conoclinium, DC. (Mist-flower.)

C. cœlestinum, DC. Rich soil, not common.

Tussilago, Tourn. (Coltsfoot.)

T. Farfara, L. Damp places, rare. (Nat. Eu.)

Sericocarpus, Nees. (White-topped Aster.)

S. solidagineus, Nees. Dry thickets and pines, not rare.
S. conyzoides, Nees. Dry places, common.

Aster, L. (Starwort—Aster.)

A. corymbosus, Ait. Common in damp woods in M., near Freehold and Colt's Neck, and north.
A. macrophyllus, L. Colt's Neck, M., frequent north.
A. Radula, Ait. Damp copses, Mer. and M.
A. surculosus, Michx. Middle and south, not common.
A. spectabilis, Ait. Sandy soil, middle and south, not rare.
A. concolor, L. Sandy places, common south.
A. patens, Ait. Dry soil, common throughout.
A. lævis, L. Woods, north.
A. undulatus, L. Along fences, common, middle and north.
A. cordifolius, L. Woods, common.
A. sagittifolius, Willd. Princeton, rare. (*Dr. Torrey.*)
A. ericoides, L. Throughout.

A. multiflorus, Ait. Road-sides and fields.
A. dumosus, L. Dry woods, not rare. (*Dr. Torrey.*) (*Canby.*)
A. Tradescanti, L. Woods and along fences, common.
A. miser, L. Along fence rows, north.
A. simplex, Willd. Common.
A. tenuifolius, L. About Freehold, in damp grounds.
A. longifolius, Lam. Swamps, common south.
A. puniceus, L. Swamps, common.
A. Novæ-Angliæ, L. Along fences and borders of meadows, throughout.
A. acuminatus, Mx. Closter, rare. (*Austin.*)
A. nemoralis, Ait. Bogs, in barrens, on the coast, not rare.
A. flexuosus, Nutt. Salt marshes, common.
A. linifolius, L. Woods, Mer. and M., and south.

Erigeron, L. (Fleabane.)

E. Canadense, L. Waste places, common. (Nat. Eu.)
E. bellidifolium, Muhl. Dry woods and along fences, not rare.
E. Philadelphicum, L. Along the Delaware, rare.
E. annuum, Pers. Sparingly in the middle counties ; in pastures.
E. strigosum, Muhl. Fields and waste places, common.

Diplopappus, Cass. (Double-bristled Aster.)

D. linariifolius, Hooker. Dry soils, common.
D. umbellatus, Torr. and Gray. Borders of swamps, not rare.
D. amygdalinus, Torr. and Gray. Low grounds, not rare.
D. cornifolius, Darl. Dry woods, common.

Solidago, L. (Golden-rod.)

S. squarrosa, Muhl. Dry wood-sides and fields, common.
S. bicolor, L. Dry, sandy, open woods, common.
Var. concolor, Gray. Plainfield. (*Hall.*)
S. latifolia, L. Edges of damp woods, Mid. and M., and Bergen Co. (*T. C. B.*)
S. cæsia, L. Damp, shady woods, Freehold and Princeton. Common north.
S. virgata, Michx. Damp pine barrens, low country.
S. puberula, Nutt. Pines. (*Canby.*) Amboy and Chatham. (*T. C. B.*)
S. stricta, Ait. W. (*Knighton.*) Budd's Lake. (*Porter.*)
S. speciosa, Nutt. Borders of woods, middle and south ; not rare.
S. rigida, L. W. (*Knighton.*) Palisades, rare. (*T. C. B.*)
S. sempervirens, L. Salt marshes, common.
S. elliptica, Ait. Swamp, Tom's River. (*Parker.*)
S. neglecta, Torrey and Gray. Hackensack swamps and South River (*T. C. B.*)
S. patula, Muhl. Low grounds, Freehold. Also Chatham and Durham. (*T. C. B.*)

S. arguta, Ait. W. (*Knighton.*)

S. Muhlenbergii, Torr. and Gray. Common north.

S. linoides, Solander. Bogs, low country; also Closter. (*T. C. B.*) Not common.

S. altissima, L. Along fences and borders of woods.

S. ulmifolia, Muhl. Low places, common.

S. pilosa, Walt. Wet places in pine and oak woods, low country.

S. odora, Ait. Dry, sandy woods and road-sides, common.

S. nemoralis, Ait. Dry fields, common throughout.

S. Canadensis, L. Borders of thickets and woods, common.

Var. procera, Gray. Hackensack swamps. (*T. C. B.*)

S. serotina, Ait. Thickets and low grounds, common.

S. gigantea, Ait. Borders of woods, common.

S. lanceolata, L. Borders of meadows and pastures, Freehold.

S. tenuifolia, Pursh. Low country, also in Bergen. (*T. C. B.*) Common.

Bigelovia, DC. (Rayless Golden-rod.)

B. nudata, DC. Pine woods near Blue Ball, M.

Chrysopsis, Nutt. (Golden Aster.)

C. falcata, Ell. Near Tom's River, in dry, sandy soil, rare. ((*Knieskern.*) Quaker Bridge. (*Canby.*)

C. Mariana, Nutt. Dry, sandy, or gravelly soil, common.

Inula, L. (Elecampane.)

I. Helenium, L. Road-sides, rare in middle counties. Common in the north. (Nat. Eu.)

Pluchea, Cass. (Marsh-Fleabane.)

P. camphorata, DC. Salt marshes, common.

Baccharis, L. (Groundsel-Tree.)

B. halimifolia, L. Not far from the sea, common.

Polymnia, L.

P. Canadensis, L. Weehawken. (*Dr. Allen.*)

P. Uvedalia, L. Weehawken. (*Dr. Allen.*)

Iva, L. (Marsh Elder—Highwater-shrub.)

I. frutescens, L. Edges of salt marshes, especially south.

Ambrosia, Tourn. (Ragweed.)

A. trifida, L. Rich, damp soil.

A. artemisiæfolia, L. Fields, common everywhere.

Xanthium, Tourn. (Cocklebur—Clotbur.)

X. strumarium, L. Near dwellings, not rare.

Var. echinatum, Gray. Near sea-coast, not rare. (Adv. South.)

X. spinosum, L. Keyport, M. (Nat. Trop. Amer.)

Eclipta, L.

E. procumbens, Michx. *Var.* brachypoda. Red Bank and Weehawken. (*T. C. B.*)

Heliopsis, Pers. (Ox-eye.)

H. lævis, Pers. Banks and copses, common.

Var. scabra, Gray. South Amboy. (*T. C. B.*)

Rudbeckia, L. (Cone-flower.)

R. laciniata, L. Thickets and along fences, not common.

R. hirta, L. Dry fields, not frequent in the middle counties, but common north.

Helianthus, L. (Sunflower.)

H. angustifolius, L. Low grounds, low country, not common.

H. giganteus, L. Low grounds, common in middle.

H. strumosus, L. Along streams ; Chatham and Closter. (*T. C. B.*)

H. divaricatus, L. Thickets and barrens, not rare.

H. decapetalus, L. Borders of damp woods, rare in middle ; Bergen Co. (*T. C. B.*)

H. tuberosus, L. Near ruins of dwellings, not rare in middle. (Adv. Brazil.)

Actinomeris, Nutt. (Actinomeris.)

A. squarrosa, Nutt. Near Paterson. (*J. C. Hornblower.*)

Coreopsis, L. (Tickseed.)

C. rosea, Nutt. Near Hightstown, Mer., wet places.

C. trichosperma, Michx. Wet places, common.

C. discoidea, Torr. and Gray. Camden. (*Canby.*) Budd's Lake. (*Porter.*)

Bidens, L. (Bur-Marigold.)

B. frondosa, L. Waste places, common.

B. connata, Muhl. Wet soil, common.

B. cernua, L. Damp, cultivated grounds, middle, and Bergen Co (*T. C. B.*)

B. chrysanthemoides, Michx. Wet places and swamps, common.

B. bipinnata, L. Old fields and rocks, common.

Helenium, L. (Sneeze-weed.)

H. autumnale, L. Along the high banks of brooks and in the edges of damp meadows, middle and north.

Galinsoga, Ruiz and Pav.

G. parviflora, Cav. Bergen Point. (*Ruger.*) (Adv. South America.)

Maruta, Cass. (May-weed.)

M. Cotula, DC. Road-sides, very common. (Nat. Eu.)

Anthemis, L. (Chamomile.)

A. arvensis, L. Fields, not rare. (Adv. Eu.)

Achillea, L. (Yarrow.)

A. Millefolium, L. Fields and road-sides, common.

Leucanthemum, Tourn. (Ox-eye Daisy.)

L. vulgare, Lam. Fields and meadows, common. (Nat. Eu.)
L. Parthenium, Gordon. Phillipsburg. (*Porter.*) (Adv. Eu.)

Tanacetum, L. (Tansy.)

T. vulgare, L. Near dwellings, escaped. (Adv. Eu.)

Artemisia, L. (Wormwood.)

A. caudata, Michx. Sandy soils near the coast, common.
A. vulgaris, L. Near Closter. (*Austin.*)

Gnaphalium, L. (Cudweed.)

G. decurrens, Ives. Marble Hill. (*Porter.*) Chatham. (*T. C. B.*)
G. polycephalum, Michx. Very common, middle and north.
G. uliginosum, L. Ditches and road-sides, common.
G. purpureum, L. Sandy soils, not rare.

Antennaria, Gærtin. (Everlasting.)

A. margaritacea, R. Br. Dry places, frequent.
A. plantaginifolia, Hooker. Sterile soil and banks, common.

Filago, Tourn. (Cotton-Rose.)

F. Germanica, L. Dry, barren fields, rare. (Nat. Eu.)

Erechthites, Raf. (Fireweed.)

E. hieracifolia, Raf. Waste places, recently burned grounds, common.

Cacalia, L. (Indian Plantain.)

C. suaveolens, L. Rich fence-rows, Freehold.
C. atriplicifolia, L. Middle and north, common.

Senecio, L. (Groundsel.)

S. vulgaris, L. W. (*Knighton.*) Hoboken. (*Austin.*) (Adv. Eu.)
S. aureus, L. Common.

Centaurea, L. (Star-Thistle.)

C. Calcitrapa, L. Camden. (*Canby.*) (Adv. Eu.)

Cirsium, Tourn. (Common or Plumed Thistle.)

C. lanceolatum, Scop. Fields and road-sides. common. (Nat. Eu.)
C. discolor, Spreng. Borders of thickets, frequent.
C. altissimum, Spreng. Fields and copses, common.
C. Virginianum, Michx. Open grounds, M.
C. muticum, Michx. Damp places and swamps.
C. pumilum, Spreng. Old fields, common.
C. horridulum, Michx. Meadows, both salt and fresh, near the coast.
C. arvense, Scop. (Canada Thistle.) North. (Nat. Eu.) Mr. C. F Austin informs me that he has examined this plant with great care, and has never found the fruit mature ; it seems therefore that its scarcity is due to the fact that the climate is too warm to mature the seed, and the plants that are found in the State are produced by seeds brought in oats obtained from the north.

Onopordon, Vaill. (Cotton or Scotch Thistle.)

O. acanthium, L. W. (*Knighton.*) Near Paterson. (*T. C. B.*) (Adv Eu.)

Lappa, Tourn. (Burdock.)

L. major, Gaert. Rich soil and waste places, common. (Nat. Eu.)

Cichorium, Tourn. (Succory or Chiccory.)

C. Intybus, L. Waste places and road-sides, rare. (Nat. Eu.) Cultivated in France for its root, which is used to adulterate coffee.

Krigia, Schreber. (Dwarf Dandelion.)

K. Virginica, Willd. Dry, waste places, common.

Cynthia, Don. (Cynthia.)

C. Virginica, Don. Moist banks, frequent.

Leontodon, L. Juss. (Hawkbit—Fall Dandelion.)

L. autumnale, L. Freehold. (Nat. Eu.)

Hieracium, Tourn. (Hawkweed.)

H Canadense, Michx. Mor. (*Porter.*) Closter. (*T. C. B.*)
H scabrum, Michx. Dry, open woods.
H. Gronovii, L. Dry, open woods, M. and O.
H. venosum, L. Dry woods, common.
H. paniculatum, L. Open woods, common in the middle.

Nabalus, Cass. (Rattlesnake-root.)

N. albus, Hook. Thickets and borders of woods.

Var. serpentaria, Gray. Chatham. (*T. C. B.*)

N. altissimus, Hook. Common in middle; also Chatham. (*T. C. B.*)

N. Fraseri, DC. Pines. (*Canby.*) Bergen Co. (*T. C. B.*), and north.

Var. integrifolius, Gray. Long Hill. (*T. C. B.*)

N. virgatus, DC. Sparingly scattered throughout the State; it has the reputation of curing the bite of the rattlesnake. Pines. (*Canby.*)

N. racemosus, Hook. Hackensack marshes. Closter. (*T. C. B.*)

Taraxacum, Haller. (Dandelion.)

T. Dens-leonis, Desf. Road-sides and lawns, common.

Lactuca, Tourn. (Lettuce.)

L. Canadensis, L.

Var. integrifolia, Tourn. and Gray. Chatham. (*T. C. B.*)

L. elongata, Muhl. Rich soil, not rare.

Mulgedium, Cass. (False or Blue Lettuce.)

M. acuminatum, DC. Closter. (*Austin.*)

M. Floridanum, DC. Common in M.

M. leucophæum, DC. Wet grounds, Chatham and Little Falls. (*T. C. B.*)

Sonchus, L. (Sow-Thistle.)

S. oleraceus, L. Waste places, common. (Nat. Eu.)

S. asper, Vill. Mor. (*Austin.*) New Durham. (*T. C. B.*)

S. arvensis, L. Fields, not common. (Nat. Eu.)

Order 54. LOBELIACEÆ. Lobelia Family.

Lobelia, L. (Lobelia.)

L. cardinalis, L. Low grounds, common.

L. syphilitica, L. About Princeton, Mer., and Crosswicks, Burl., found sparingly in middle counties. Common in the north.

L. puberula, Michx. Freehold, Lawrenceville Landing, rare.

L. inflata, L. Pasture fields, common. This is the celebrated lobelia of the Thompsonians.

L. spicata, Lam. Woods, north.

L. Nuttallii, Rœm. and Sch. Damp grounds, low country.

L. Canbyi, Gray. Batestown. (*Canby.*) Manchester. (*Porter.*)

L. Dortmanna, L. Borders of ponds. North. (*Austin.*)

Order 55. CAMPANULACEÆ. Campanula Family.

Campanula, Tourn. (Bellflower.)

C. rotundifolia, L. A pretty, delicate flower found in damp, grassy

places, radical leaves rotund, but frequently in such a state of decay as not to be found easily. Hightstown, and Princeton, and north.

C. aparinoides, Pursh. Bogs and wet meadows.

C. rapunculoides. Chatham. (*T. C. B.*)

Specularia, Heister. (Venus's Looking-glass.)

S. perfoliata, DC. Dry fields, common.

Order 56. ERICACEÆ. Heath Family.

Gaylussacia, H. B. K. (Huckleberry.)

G. dumosa, Torr. and Gray. Sandy swamps, not very rare.

G. frondosa, Torr. and Gray. Woods, middle and north, common.

G. resinosa, Torr. and Gray. Woods and swamps, common.

Vaccinium, L. (Cranberry—Blueberry—Bilberry.)

V. Oxycoccus, L. Southern parts of Monmouth and northern parts of Ocean. Budd's Lake. (*Porter.*) Closter. (*Austin.*) Northern Railroad. (*Lockwood.*)

Formerly this plant was frequent in Monmouth and Ocean Counties. I think, however, it is at present rare in those localities. The cranberry-growers have exterminated it from their bogs, because the fruit is too small to have a market value, and its rival, the V. macrocarpon, has supplanted it.

On account of the commercial importance which the cranberry has reached, within a few years, the V. macrocarpon deserves more than a passing notice.

V. macrocarpon, Ait. Stem from 1–5 feet in length, prostrate, throwing off assurgent flowering and fruit-bearing branches; leaves elliptical, margins rolled over, upper side dark green, glaucous underneath; flower large; anthers more than twice the length of the filaments; fruit varying from campanulate to orbicular, dark when ripe.

This plant sports with great freedom, especially as to the fruit. The leaf does not vary, except in size.

There are three well-marked varieties known among cultivators, as follows:

1. Bell-shaped, or pear-shaped.
2. Bugle-shaped.
3. Cherry-shaped; this form is sometimes flattened at the poles, and is then called cheese-shaped.

Cultivators who have made careful observations, think they have detected from twenty to forty varieties. From correspondence and interviews with some of the largest and most intelligent growers in the State of New Jersey, I am led to believe that the following five forms are very constant: *

* On a visit to the plantations or bogs of the Beaver Dam Company, and to those of Ephraim P. Empson, I noticed these as the prevailing forms. The bogs of the Beaver

No. 1. Fruit, pear-shaped, from six-tenths of an inch to an inch in length, and from four to seven-tenths in diameter, dark when ripe.

No. 2. Varying in shape from fusiform to cylindrical, sometimes smaller in the middle than at the ends, and every way larger than No. 1; dark when ripe. This is what the cultivators call bugle-shaped.

No. 3. Nearly globular, from a quarter to three-quarters of an inch in diameter; very dark when ripe.

No. 4. Nearly globular, about the size of No. 3, and creamy white when ripe.

No. 5. Very much smaller than Nos. 3 and 4, globular, three to four-tenths of an inch in diameter, very prolific and very dark when ripe.

V. stamineum, L. Dry woods, frequent.

V. Pennsylvanicum, Lam. Dry hills and woods, common.

V. vacillans, Solander. Borders of woods, common.

V. corymbosum, L. Swamps, common.

Var. atrococcum, Gray.

Chiogenes, Salisb.

C. hispidula, Torr. and Gray. New Durham. (*T. C. B.*)

Arctostaphylos, Adans. (Bearberry.)

A. Uva-ursi, Spreng. Pine barrens, common, O. Palisades. (*T. C. B.*)

Epigaæ, L. (Ground Laurel—Trailing Arbutus.)

E. repens, L. Sandy woods, throughout.

Gaultheria, Kalm. (Aromatic Wintergreen.)

G. procumbens, L. Cool, damp woods, common.

Leucothoe, Don. (Leucothoe.)

L. racemosa, Gray. Swamps, middle and south.

Cassandra, Don. (Leather-Leaf.)

C. calyculata, Don. Bogs and swamps, common north.

Andromeda, L. (Andromeda.)

A. polifolia, L. Budd's Lake, Mor. (*Porter* and *Austin.*)

A. Mariana, L. Sandy places, common, low country

A. ligustrina, Muhl. Swamps, common.

Dam Company are managed by Mr. Thomas Ivins, of New Egypt, who very politely took me over the plantations of the Company. Mr. Empson took special pains to show me his large plantations, pointing out localities where different forms prevailed. He furnished me last year with a very large number of specimens of plants. Dr. Lockwood also furnished me with plants from different localities in Monmouth and Ocean counties.

Clethra, L. (White Alder—Sweet Pepperbush.)

C. alnifolia, L. Swamps and damp sandy soils, common.

Kalmia, L. (American Laurel.)

K. latifolia, L. (Mountain Laurel—Calico Bush—Spoon-wood.) This evergreen is one of the most beautiful objects of the forests throughout the middle and northern parts of the State ; with care, it may be removed to the lawn. Its showy flowers in June, and its deep green foliage during winter, make it a most interesting object. Woods, common.

The **K.** angustifolia is also an evergreen, but the flowers are inconspicuous, and leaves pale.

K. angustifolia, L. Damp places and swamps, common.

K. glauca, Ait. Budd's Lake, Mor. (*Porter.*) Also mountains of the north.

Azalea, L. (False Honeysuckle—Azalea.)

This genus has two representatives in the State, which are great beauties, and bear transplanting well. The A. viscosa is easily distinguished from the A. nudiflora, by its *sticky* flowers.

A. viscosa, L. Sandy swamps, very common.

A. nudiflora, L. Thickets, on hills, common.

Rhododendron, L. (Rose-bay.)

R. maximum, L. (Great Laurel.) This beautiful shrub only needs to be seen to be appreciated. It grows along the banks of the Delaware, from Bordentown, all along through Mer., and the northern counties. No lawn should be without this object of beauty. In describing it I might say it is like K. latifolia, but much more beautiful. Bergen Co. (*T. C. B.*)

Leiophyllum, Pers. (Sand Myrtle.)

L. buxifolium, Ell. Sandy, damp barrens, low country.

Pyrola, Tourn. (Wintergreen—Shin-leaf.)

P. rotundifolia, L. Damp or shady woods, not common.

P. elliptica, Nutt. Damp woods.

P. chlorantha, Swartz. Woods, throughout.

P. secunda, L. Shady, rich woods, middle and north.

Chimaphila, Pursh. (Pipsissewa.)

C. umbellata, Nutt. Dry woods, common.

C. maculata, Pursh. Dry woods, common with the last.

Monotropa, L. (Indian Pipe—Pine-sap.)

M. uniflora, L. Shady woods, common.

M. Hypopitys, L. Less common than the last, woods.

Order 58. AQUIFOLIACEÆ. Holly Family.

Ilex, L. (Holly.)

I. opaca, Ait. (American Holly.) This tree is found in M., sparingly. It has a wavy leaf, whose edge is armed with sharp spines. Flowers inconspicuous, berries red. It bears cultivation well, and is a beautiful object on account of its rich evergreen foliage.

I. verticillata, Gray. Camden. (*Canby.*) And north.

I. lævigata, Gray. Pines. (*Canby.*)

I. glabra, Gray. Southern parts of M. and northern parts of O., Near Squankum and Howell-works. Low country, also in Bergen Co. (*T. C. B.*)

Nemopanthes, Raf. (Mountain Holly.)

N. Canadensis, DC. Swamps, O.; also Budd's Lake, Mor. (*Porter.*) Pines. (*Canby.*) Closter. (*T. C. B.*)

Order 59. EBENACEÆ. Ebony Family.

Diospyros, L. (Date-Plum—Persimmon.)

D. Virginiana, L. Borders of woods, common in middle counties; Bergen and Hun. Co. (*T. C. B.*)

Order 62. PLANTAGINACEÆ. Plantain Family.

Plantago, L. (Plantain—Ribgrass.)

P. major, L. Near dwellings, common. (Nat. Eu.)

P. maritima, L. Salt marshes, not rare.

P. lanceolata, L. Fields and pastures, very common. (Nat. Eu.)

P. Virginica, L. Sandy soil, not rare.

P. pusilla, Nutt. Dry fields and road-sides, low country, not rare.

P. heterophylla, Nutt. South Jersey. (*Austin.*)

Order 63. PLUMBAGINACEÆ. Leadwort Family.

Statice, Tourn. (Sea-Lavender—Marsh-Rosemary.)

S. Limonium, L. (Pride of the Salt Meadow.) This beautiful, showy little plant may well be called the pride of the meadow, for it is the most beautiful object that adorns the borders of our salt marshes. It grows from one to two feet high, the whole top densely covered with pale bluish flowers. It is remarkable for retaining the color and life-like appearance of the flowers in a dry state; remaining unchanged in appearance for months after collection. It is frequently collected, the stems inserted in dry sand, and kept all winter as a parlor ornament. Salt marshes, not rare.

Var. Caroliniana, Walt. Cape May. (*Canby.*)

ORDER 64. **PRIMULACEÆ.** PRIMROSE FAMILY.

Trientalis, L. (Chickweed-Wintergreen.)

T. Americana, Pursh. Damp shady places, frequent north.

Lysimachia, Tourn. (Loose-strife.)

L. thyrsiflora, L. Hackensack marshes ; Budd's Lake. (*Porter.*)
L. stricta, Ait. Low grounds, common.
L. quadrifolia, L. Damp places, common.
L. ciliata, L. Freehold, low grounds and thickets, common.
L. lanceolata, Walt. Common in damp places.

Anagallis, Tourn. (Pimpernel.)

A. arvensis, L. Waste sandy fields, frequent south. (Nat. Eu.)

Samolus, L. (Water Pimpernel—Brook-weed.)

S. Valerandi, L.
Var. Americanus, Gray. Wet places, common south.

Hottonia, L.

H. inflata, Ell. Eatontown ; also Closter. (*Austin.*)

ORDER 65. **LENTIBULACEÆ.** BLADDER-WORT FAMILY.

Utricularia, L. (Bladder-wort.)

U. inflata, Walt. Stagnant pools, near Long Branch.
U. vulgaris, L. Throughout.
U. clandestina, Nutt. M.; Atsion. (*Canby.*)
U. intermedia, Hayne. Closter and Mead's Basin. (*Austin.*)
U. striata, LeConte. About Upper Squankum, and low country.
U. gibba, L. Closter. (*T. C. B.*)
U. purpurea, Walt. Ponds, floating, not rare in low country.
U. cornuta, Michx. Sandy bogs, common.
U. subulata, L. Sandy swamps, rare.
These species are found sparingly, except U. cornuta.

ORDER 66. **BIGNONIACEÆ.** BIGNONIA FAMILY.

Tecoma, Juss. (Trumpet-flower.)

T. radicans, Juss. Escaped from cultivation ; not rare. (Adv. S.)

Catalpa, Scop., Walt. (Catalpa—Indian Bean.)

C. bignonioides, Walt. Cultivated, common. (Adv. S.-west.)

Martynia, L. (Unicorn-plant.)

M. proboscidea, Glox. Escaped from gardens, rare. (Adv. West.)

ORDER 67. **OROBANCHACEÆ.** BROOM-RAPE FAMILY.

Epiphegus, Nutt. (Beech-drops—Cancer-root.)

E. Virginiana, Bart. Common north.

Conopholis, Wallroth. (Squaw-root—Cancer-root.)

C. Americana, Wallroth. On the roots of trees in shady woods. Camden. (*Parker.*) Common north.

Aphyllon, Mitchell. (Naked Broom-rape.)

A. uniflorum, Torr. and Gray. Thickets or shady woods, rare.

ORDER 68. **SCROPHULARIACEÆ.** FIG-WORT FAMILY.

Verbascum, L. (Mullein.)

V. Thapsus, L. Fields and road-sides, common. (Nat. Eu.)
V. Blattaria, L. Waste places and fields, rather common. (Nat. Eu.)
V. Lychnitis, L. W. (*Knighton.*) (Adv. Eu.)

Linaria, Tourn. (Toad-Flax.)

L. Canadensis, Spreng. Sandy soils, common.
L. vulgaris, Mill. Road-sides, not rare; common in Sus. (Nat. Eu.)

Scrophularia, Tourn. (Fig-wort.)

S. nodosa, L. Along fences, rather rare in middle counties.

Chelone, Tourn. (Turtle-head—Snake-head—Balmony.)

C. glabra, L. Grows in wet places. Flowers pure white, sometimes with a purplish tint. A rather coarse plant, but striking on account of its singular-shaped flower. Rather common.

Pentstemon, Mitchell. (Beard-tongue—Pentstemon.)

P. pubescens, Solander. Princeton and Freehold, rare. Bergen Co. (*T. C. B.*)

Mimulus, L. (Monkey-flower.)

M. ringens, L. Wet places, frequent.
M. alatus, Ait. Low grounds, rare.

Herpestis, Gærtn.

H. amplexicaulis, Pursh. Wet places. (*Dr. Gray.*)

Gratiola, L. (Hedge-Hyssop.)

G. Virginiana, L. Wet places, common.
G. sphærocarpa, Ell. Cape May. (*Austin.*)
G. aurea, Muhl. Shores of mill-ponds, common south.
G. pilosa, Michx. Camden. (*Canby.*) (*Smith.*) (*Parker.*)

Ilysanthes, Raf.

I. gratioloides, Benth. Wet places, not rare.

Micranthemum, Mx.

M. Nuttallii, Gray. Camden Co. (*Parker.*)

Limosella, L.

L. aquatica, L.

Var. tenuifolia, Hoffm. Long Branch. (*Dr. Torrey.*) New Bridge. (*Austin.*)

Veronica, L. (Speedwell.)

V. Virginica, L. Damp grounds, M.; frequent in Bergen Co. (*Austin.*)

V. Anagallis, L. Hightstown, along streams. Northern Railroad. (*T. C. B.*)

V. Americana, Schro. New Egypt, O., rare; frequent in Bergen Co. (*T. C. B.*)

V. scutellata, L. Damp grounds, frequent.

V. officinalis, L. Road-sides, common.

V. serpyllifolia, L. Fields and road-sides, common.

V. peregrina, L. Borders of fields, common.

V. arvensis, L. Cultivated fields, rather common. (Nat. Eu.)

V. spicata, L. Escaped from gardens. North.

V. hederæfolia, L. Weehawken. (*Austin* and *Johnson.*) Palisades. (*T. C. B.*)

Gerardia, L. (Gerardia—False Foxglove.)

This genus has some very interesting members; among the most striking species are the G. purpurea, whose delicate, showy, purple flowers are very pretty; the G. flava and G. quercifolia have large, showy, yellow flowers, turning black when pressed.

G. purpurea, L. Damp places, common.

G. maritima, Raf. Salt marshes, not rare.

G. tenuifolia, Vahl. Damp soils, common.

G. flava, L. Woods, Princeton, Freehold, Hightstown, common north.

G. quercifolia, Pursh. Dry woods, common.

G. integrifolia, Gray. (*Austin.*)

G. pedicularia, L. Dry, shady places, common.

Castilleia, Mutis. (Painted-Cup.)

C. coccinea, Spreng. Found sparingly in M. and Mer.; frequent in Bergen Co. (*T. C. B.*)

Schwalbea, Gronov. (Chaff-seed.)

S. Americana, Tourn. Pines. (*James.*)

Pedicularis, Tourn. (Louse-wort.)

P. Canadensis, L. Banks and copses, common.

P. lanceolata, Michx. Damp ground about Freehold, common north.

Melampyrum, Tourn. (Cow-Wheat.)

M. Americanum, Michx. Open and shady woods, common.

Order 70. VERBENACEÆ. Vervain Family.

Verbena, L. (Vervain.)

V. angustifolia, Michx. Dry soil, frequent middle and north.

V. hastata, L. Damp soils, common.

V. urticifolia, L. Road-sides and waste places, common.

V. officinalis, L. Road-sides in Mer.; frequent. (Nat. Eu.)

Phryma, L. (Lopseed.)

P. Leptostachya, L. Rich copses, not rare.

Order 71. LABIATÆ. Mint Family.

Teucrium, L. (Germander.)

T. Canadense, L. Low grounds, rather rare.

Trichostema, L. (Blue Curls.)

T. dichotomum, L. Common.

T. lineare, Nutt. Sandy fields and barrens, low country.

Isanthus, Michx. (False Pennyroyal.)

I. cæruleus, Michx. Freehold, not rare.

Mentha, L. (Mint.)

M. rotundifolia, L. Hunterdon, on the Delaware. (*Porter.*) Bloomfield. (*T. C. B.*) (Adv. Eu.)

M. viridis, L. Wet meadows, common. (Nat. Eu.)

M. piperita, L. Brooks and low grounds, common. (Nat. Eu.)

M. sativa, L. River banks, and edges of damp meadows. (Adv. Eu.)

M. Canadensis, L. Damp places, road-sides, common.

Var. glabrata, Benth. (*T. C. B.*)

Lycopus, L. (Water Horehound.)

L. Virginicus, L. Moist, shady places, common.

L. Europæus, L. Damp, shady places, common.

L. sessilifolius, Gray. Tom's River, O. (*Porter.*) Atsion. (*Canby.*)

L. sinuatus, Gray. M., not common.

Cunila, L. (Dittany.)

C. Mariana, L. Hudson and Bergen Counties. (*T. C. B.*)

Pycnanthemum, Michx. (Mountain Mint—Basil.)

P. aristatum, Michx. Pine barrens, not rare, O.

P. incanum, Michx. Along fences and in rocky places. North-east.

P. clinipodioides, Torr. and Gray. Closter, common. (*T. C. B.*)

P. Torreyi, Benth. Dry hedge-rows and along fences about Freehold. Palisades. (*T. C. B.*)

P. muticum, Pers. Weehawken. (*Dr. Torrey.*) Closter. New Durham. (*T. C. B.*)

P. lanceolatum, Pursh. Along fences and the borders of cultivated fields, rather common in middle and northern counties.

P. linifolium, Pursh. Found growing with the last.

Origanum, L. (Wild Marjoram.)

O. vulgare, L. W. (*Knighton.*) Weehawken. (*T. C. B.*) (Nat. Eu.)

Thymus, L. (Thyme.)

T. serpyllum. Frequent W. and Mer. (*Knighton* and *T. C. B.*) (Adv. Eu.)

Calamintha, Mœnch. (Calaminth.)

C. Clinopodium, Benth. Open copses, common north.

Melissa, L. (Balm.)

M. officinalis, L. Near dwellings; escaped from gardens. About Hightstown, Bergen Point, and Hoboken. (*T. C. B.*) (Nat. Eu.)

Hedeoma, Pers. (Mock Pennyroyal.)

H. pulegioides, Pers. Road-sides, common.

Collinsonia, L. (Horse-Balm.)

C. Canadensis, L. Rich, open woods, common.

Salvia, L. (Sage.)

S. lyrata, L. Open woods and fields, common. Low country.

S. urticifolia, L. Mountains. (*Beck.*)

Monarda, L. (Horse Mint.)

M. didyma, L. Damp, open woods. North, not common.

M. fistulosa, L. Woods. (*Dr. Torrey.*)

M. punctata, L. (Horse Mint.) Growing in dry, sandy fields in M., near Blue Ball; in Mid., near Spotswood and Old Bridge. Frequent south.

Lophanthus, Benth. (Giant Hyssop.)

L. nepetoides, Benth. Along fences and in the edges of woods, Freehold, not common; also Hoboken and Weehawken. (*T. C. B.*)

L. scrophulariæfolius, Benth. Borders of thickets, Freehold. Hoboken and Weehawken. (*T. C. B.*)

Nepeta, L. (Cat-Mint.)

N. Cataria, L. Near dwellings, common. (Adv. Eu.)

N. Glechoma, Benth. Waste grounds, near dwellings, not rare. (Adv. Eu.)

Physostegia, Benth. (False Dragon-Head.)

P. Virginiana, Benth. Wet banks of streams, rare. (*Knieskern.*)

Brunella, Tourn. (Self-heal.)

B. vulgaris, L. Woods and fields, common.

Scutellaria, L. (Skullcap.)

S. pilosa, Michx. Frequent in Mer. and M.

S. integrifolia, L. Damp places, common in middle and north.

S. parvula, Michx. W. (*Knighton.*)

S. galericulata, L. Weehawken and New Durham. (*T. C. B.*) W. (*Knighton.*)

S. lateriflora, L. Wet, shady places, frequent.

Marrubium, L. (Horehound.)

M. vulgare, L. Waste places, common M. and O. (*Knieskern.*) (Nat. Eu.)

Galeopsis, L. (Hemp-Nettle.)

G. Tetrahit, L. W. (*Knighton.*) Phillipsburg. (*T. C. B.*) (Nat. Eu.)

G. Ladanum, L. Near dwellings, rare. (*Knieskern.*) (Adv. Eu.)

Stachys, L. (Hedge-Nettle.)

S. palustris, L. Wet banks, not common.

Var. aspera (S. aspera, Michx.) W. (*Knighton.*) Frequent south. (*Canby.*)

S. hyssopifolia, Michx. Camden. (*Canby.*) Closter. (*Austin.*)

Leonurus, L. (Motherwort.)

L. Cardiaca, L. Waste places, near dwellings, M. and O., not rare. (Nat. Eu.)

Lamium, L. (Dead-Nettle.)

L. amplexicaule, L. Cultivated grounds, M. and O., rare. (Adv. Eu.)

Order 72. **BORRAGINACEÆ.** Borage Family.

Echium, Tourn. (Viper's Bugloss.)

E. vulgare, L. George's Road, near cross-roads, Mid.; also in W. (*Knighton.*) Bergen Point. (*T. C. B.*) (Nat. Eu.)

Lycopsis, L.

L. arvensis. Bergen. (*T. C. B.*) (Adv. Eu.)

Symphytum, Tourn. (Comfrey.)

S. officinale, L. Road-sides, near dwellings, not rare. (Adv. Eu.)

Lithospermum, Tourn. (Gromwell—Puccoon.)

L. arvense, L. Sandy banks, rare. (*Knieskern.*) (Nat. Eu.)
L. officinale, L. W. (*Knighton.*) Common north. (*Austin.*) (Nat. Eu.)

Myosotis, L. (Scorpion-grass—Forget-me-not.)

M. palustris, Withering. Wet places, not rare.
Var. laxa, Gray. Damp places, Jacksonville, M., common.
M. arvensis, L. Closter. (*Austin.*)
M. verna, Nutt. Bergen Co. (*T. C. B.*)

Echinospermum, Swartz. (Stickseed.)

E. Lappula, Lehm. Damp places, Freehold, also Hoboken. (*T. C. B.*) (Nat. Eu.)

Cynoglossum, Tourn. (Hound's-Tongue.)

C. officinale, L. Common. (Nat. Eu.)
C. Virginicum, L. Damp woods, north.
C. Morisoni, DC. Edges of damp meadows and along brooks, Freehold.

ORDER 73. **HYDROPHYLLACEÆ.** WATERLEAF FAMILY.

Hydrophyllum, L. (Waterleaf.)

H. Virginicum, L. Damp woods, middle and north.

Ellisia, L. (Ellisia.)

E. Nyctelea, L. Banks of Delaware, near Trenton. (*Canby.*)

ORDER 74. **POLEMONIACEÆ.** POLEMONIUM FAMILY.

Polemonium, Tourn. (Greek Valerian.)

P. reptans, L. Belvidere. (*Knighton.*)
P. cæruleum, L. W. (*Garber.*)

Phlox, L. (Phlox.)

P. paniculata, L. Hunterdon. (*Knighton.*) Most likely escaped from cultivation. (Adv. west.)
P. maculata, L. Near Princeton, Mer., W. (*Porter.*)
P. pilosa, L. Woodbury, G. (*Canby.*) Passaic and Chatham. *T. C. B.*) Borders of woods, not common.
P. subulata, L. Middle and north.

Pyxidanthera, Michx. (Pyxidanthera.)

P. barbulata, Michx. A beautiful plant ; low country, common.

Order 75. CONVOLVULACEÆ. Convolvulus Family.

Ipomœa, L. (Morning-Glory.)

I. purpurea, Lam. Camden. (*Canby.*) (Adv. Tropical Amer.)

I. pandurata, Meyer. Sandy fields, Prospertown, O., rare. Reported common in W. by Dr. Knighton ; also Bergen Co. (*T. C. B.*)

Convolvulus, L. (Bindweed.)

C. arvensis, L. Fields, common near the coast ; also Closter, rare. (*T. C. B.*) (Nat. Eu.)

Calystegia, R. Br. (Bracted Bindweed.)

C. sepium, R. Br. Low grounds, common.

C. spithamæa, Pursh. Sandy places, common in M.

Bonamia, Thouars.

B. Pickeringii, Gray. Pines. (*Canby.*)

Cuscuta, Tourn. (Dodder.)

C. Epilinum, Weihe. Flax fields, not common. (Adv. Eu.)

C. tenuiflora, Engelm. Damp places. Pines. (*Canby.*)

C. arvensis, Beyrich. Cape May. (*Canby.*) Shark River. (*T. C. B.*)

C. Gronovii, Willd. Damp meadow borders, common.

C. compacta, Juss. Common middle and north.

Order 76. SOLANACEÆ. Nightshade Family.

Solanum, Tourn. (Nightshade.)

S. Dulcamara, L. Around dwellings, rather common. (Nat. Eu.)

S. nigrum, L. Cultivated fields near dwellings, not rare. (Nat. Eu.)

S. Carolinense, L. Phillipsburg. (*Porter.*) Bergen Point. (*T. C. B.*)

Physalis, L. (Ground Cherry.)

P. pubescens, L. Closter. (*T. C. B.*)

P. viscosa, L. Fields and road-sides, not rare.

Hyoscyamus, Tourn. (Henbane.)

H. niger, L. W. (*Knighton.*) (Adv. Eu.)

Datura, L.

D. Stramonium, L. (Simon Pumpkin—Jamestown-weed—Thorn-

Apple.) This weed is said to afford relief in asthma. The leaves are cured and smoked like tobacco. It is said to spring up on the top of heaps of earth taken from far below the surface in digging deep wells. Waste places, common. (Adv. Asia.)

D. Tatula, L. Phillipsburg. (*Porter.*) (Adv. Tropical Amer.)

Order 77. GENTIANACEÆ. Gentian Family.

Sabbatia, Adans. (American Centaury.)

S. lanceolata, Torr. and Gray. Wet places in the pines, common.

S. angularis, Pursh. Dry grounds, low country, frequent; also in Bergen Co. (*T. C. B.*)

S. stellaris, Pursh. Borders of salt marshes, Mid., M., and O., common.

S. chloroides, Pursh. Salt marshes, eastern parts of the State, not rare.

Erythræa, Pers.

E. ramosissima, Pers. Closter. (*T. C. B.*) (Nat. Eu.)

Gentiana, L. (Gentian.)

A very pretty genus; plants growing in damp grounds. **G.** crinita and **G.** quinqueflora, grow sparingly in M. and Mer.

G. quinqueflora, Lam. Damp grounds, Freehold and Hightstown: also Elizabeth. (*T. C. B.*) Sus. (*Austin.*)

G. crinita, Frœl. Wet places, frequent, middle and north.

G. alba, Muhl. Hunterdon. (*Knighton.*)

G. Andrewsii, Griseb. Shark River and north.

G. Saponaria, L. Shark River, M., Freehold, Mer., Hightstown, and south.

G. angustifolia, Michx. Damp soil, low country, rare.

Bartonia, Muhl.

B. tenella, Muhl. Moist, open woods, not rare.

Obolaria, L. (Obolaria.)

O. Virginica, L. Near Princeton and about Lawrenceville. A very curious and interesting plant, not common.

Menyanthes, Tourn. (Buckbean.)

M. trifoliata, L. Bergen Co. (*T. C. B.*) Budd's Lake, Mor. (*Porter.*)

Limnanthemum, Gmelin. (Floating Heart.)

L. lacunosum, Grisebach. North-east. (*T. C. B.*) Spring Garden. (*Canby.*)

Order 79. APOCYNACEÆ. Dogbane Family.

Apocynum, Tourn. (Dogbane—Indian Hemp.)

A. androsæmifolium, L. Borders of sandy thickets, frequent north.
A. cannabinum, L. River banks, common.

Order 80. ASCLEPIADACEÆ. Milkweed Family.

Asclepias, L. (Milkweed—Silkweed.)

A. Cornuti, Decaisne. Fields and road-sides, rather rare in the middle counties, common in the north.
A. phytolaccoides, Pursh. North.
A. purpurascens, L. Wood-sides.
A. variegata, L. Woods near Smithville, rare. Closter. (*T. C. B.*)
A. quadrifolia, Jacq. Frequent.
A. incarnata, L. Wet grounds, common.
A. obtusifolia, Michx. Sandy woods and fields, not rare.
A. rubra, L. About cranberry swamps, M. and O.
A. paupercula, Michx. Salt marshes, O., not common.
A. tuberosa, L. Dry fields, common.
A. verticillata, L. Middle and north.

Acerates, Ell. (Green Milkweed.)

A. viridiflora, Ell. Dry pine woods, M. Closter. (*T. C. B.*)

Order 81. OLEACEÆ. Olive Family.

Ligustrum, Tourn. (Privet.)

L. vulgare, L. Road-sides; middle, frequent; also Stanhope. (*T. C. B.*) (Nat. Eu.)

Chionanthus, L. (Fringe-tree.)

C. Virginica, L. Camden, in swamps, not common. (*Canby.*)

Fraxinus, Tourn. (Ash.)

F. Americana, L. Princeton and north.
F. pubescens, Lam. Low grounds, Bergen Co. (*T. C. B.*)
F. sambucifolia, Lam. Swamps, M. and O., frequent north.

Order 82. ARISTOLOCHIACEÆ. Birth-wort Family.

Asarum, Tourn. (Asarabacca—Wild Ginger.)

A. Canadense, L. North.

Aristolochia, Tourn. (Birth-wort.)

A. Serpentaria, L. Woods near Hightstown, and north-east. (*T. C. B.*)

ORDER 84. **PHYTOLACCACEÆ.** POKEWEED FAMILY.

Phytolacca, Tourn. (Pokeweed.)

P. decandra, L. New ground, common.

ORDER 85. **CHENOPODIACEÆ.** GOOSEFOOT FAMILY.

Chenopodium, L. (Goosefoot—Pigweed.)

C. album, L. Fields and gardens, very common. (Nat. Eu.)
C. glaucum, L. Hoboken. (*T. C. B.*) (Nat. Eu.)
C. urbicum, L. About dwellings, common. (Nat. Eu.)
C. murale, L. Near dwellings, common. (Adv. Eu.)
C. hybridum, L. Cultivated grounds, common. (Nat. Eu.)
C. Botrys, L. Near dwellings, common. (Adv. Eu.)
C. ambrosioides, L. Waste places, common. (Nat. Tropical Amer.)
Var. anthelminticum, Gray. (Wormseed.) Waste places, common. (Nat. Tropical Amer.)

Blitum, Tourn. (Blite.)

B. maritimum, Nutt. Salt marshes, rare, O.
B. capitatum, L. Near Orange, N. J. (*T. C. B.*)

Atriplex, Tourn. (Orache.)

A. patula, L. Closter, rare. (*T. C. B.*)
Var. hastata, Gray. Salt marshes, not rare.
Var. literalis, Gray. Communipaw. (*T. C. B.*)
A. arenaria, Nutt.

Salicornia, Tourn. (Glasswort—Samphire.)

S. herbacea, L. Salt marshes, common.
S. Virginica, L. Cape May. (*Canby.*)
S. fruticosa, L.
Var. ambigua, Gray. Salt marshes, not common.

Suæda, Forskal. (Sea Blite.)

S. maritima, Dumortier. Salt marshes, not rare. Cape May. (*Canby.*)

Salsola, L. (Salt-wort.)

S. Kali, L. Sea-shore, common. Atsion. (*Canby.*)

ORDER 86. **AMARANTACEÆ.** AMARANTH FAMILY.

Amarantus, Tourn. (Amaranth.)

A. hypochondriacus, L. Hunterdon and W. (*Knighton.*) (Adv. Tropics.)
A. retroflexus, L. Waste places, common. (Adv. Tropics.)

A. albus, L. Road-sides, common. (Nat. Trop. Amer.)

A. spinosus, L. Waste places and road-sides, rare. (Nat. Trop. Amer.)

A. pumilus, Raf. Weehawken. (*T. C. B.*)

Acnida, L. (Water-Hemp.)

A. cannabina, L. Salt marshes, frequent.

ORDER 87. **POLYGONACEÆ.** BUCKWHEAT FAMILY.

Polygonum, L. (Knotweed.)

P. orientale, L. Waste places, rare. (Adv. India.)

P. Careyi, Olney. Tom's River, O. (*Porter.*) Also, Atlantic. (*Canby.*) Bergen Co. (*Austin.*)

P. Pennsylvanicum, L. Moist waste places, common.

P. incarnatum, Ell. Common.

P. Persicaria, L. Waste places, common. (Nat. Eu.)

P. Hydropiper, L. Damp waste places, common.

P. acre, H. B. K. Common near Closter. (*Austin.*)

P. hydropiperoides, Michx. Damp meadows and ditch-sides, common.

P. amphibium, L. Wet grounds, on the borders of brooks, and in the water.

P. Virginianum, L. Low, damp soil, common.

P. articulatum, L. Dry, sandy soil, common, low country.

P. aviculare, L. Everywhere common.

Var. erectum, Roth. Common near the coast.

P. maritimum, L. Coast, M. and O., frequent.

P. tenue, Michx. Hills, frequent.

P. arifolium, L. Low grounds, common.

P. sagittatum, L. Low grounds, common.

P. Convolvulus, L. Waste places, common. (Nat. Eu.)

P. cilinode, Michx. Mountains, north.

P. dumetorum, L. Thickets, not rare.

Fagopyrum, Tourn. (Buckwheat.)

F. esculentum, Mœnch. Cultivated fields, waste places. (Adv. Eu.)

Rumex, L. (Dock—Sorrel.)

R. orbiculatus, Gray. Closter. (*Austin.*) Budd's Lake. (*Porter.*)

R. altissimus, Wood. Hackensack meadows. (*T. C. B.*)

R. verticillatus, L. Swamps, common.

R. crispus, L. Waste and cultivated grounds, common. (Nat. Eu.)

R. obtusifolius, L. Fields, common. (Nat. Eu.)

R. sanguineus, L. Near dwellings, common. (Nat. Eu.)

R. maritimus, L. Salt marshes, not rare.

R. Acetosella, L. Fields and pastures, too common. (Nat. Eu.)

ORDER 88. **LAURACEÆ.** LAUREL FAMILY.

Sassafras, Nees. (Sassafras.)

S. officinale, Nees. Dry woods, common.

Lindera, Thunberg. (Wild Allspice—Fever-bush.)

L. Benzoin, Meisner. Swamps and damp woods, not rare.

ORDER 89. **THYMELEACEÆ.**

Dirca, L.

D. palustris, L. Shady woods ; Palisades. (*Austin.*) Below Camden. (*Porter.*)

ORDER 91. **SANTALACEÆ.** SANDALWOOD FAMILY.

Comandra, Nutt. (Bastard Toad-flax.)

C. umbellata, Nutt. Sandy, open woods, not rare.

ORDER 92. **LORANTHACEÆ.** MISTLETOE FAMILY.

Phoradendron, Nutt. (False Mistletoe.)

P. flavescens, Nutt. (Mistletoe.) On the Nyssa, Mer., near Hightstown, not common. I have never seen this plant on Pines.

ORDER 93. **SAURURACEÆ.** LIZARD'S-TAIL FAMILY.

Saururus, L. (Lizard's-tail.)

S. cernuus, L. Borders of ponds and streams, abundant.

ORDER 94. **CERATOPHYLLACEÆ.** HORNWORT FAMILY.

Ceratophyllum, L. (Hornwort.)

C. demersum, L. In sluggish streams, common.

ORDER 95. **CALLITRICHACEÆ.** WATER-STARWORTS.

Callitriche, L. (Water-Starwort.)

C. Austini, Eng. Bergen Co. (*T. C. B.*)

C. verna, L. Bottoms of dried-up ponds, M. Closter. (*Austin.*)

C. heterophylla, Pursh. Ditches and pools, common.

ORDER 96. **PODOSTEMACEÆ.** RIVER-WEED FAMILY.

Podostemon, Michx. (River-weed.)

P. ceratophyllus, Michx. Slow stony brooks, common.

Order 97. EUPHORBIACEÆ. Spurge Family.

Euphorbia, L. (Spurge.)

E. polygonifolia, L. Sandy sea-shore, common.

E. maculata, L. Cultivated grounds. A troublesome weed in the potato and corn fields.

E. hypericifolia, L. Fields and meadows, rather rare.

E. corollata, L. Sandy soil, common in M.

E. Ipecacuanhæ, L. Sandy soils in M. and O. and south. This plant assumes many forms in foliage, and has a large root.

E. Cyparissias, L. Bergen Co. Escaped from cultivation. (*T. C. B.*)

E. Peplus, L. W. (*Knighton.*) (Adv. Eu.)

Acalypha, L. (Three-seeded Mercury.)

A. Virginica, L. Fields and open places, common.

Var. gracilens, Gray. Sandy fields, quite common.

A. Caroliniana, Walt. Ell. Princeton. (*Dr. Torrey.*) And north.

Croton, L. (Croton.)

C. capitatus, Michx. (*Knieskern.*)

Crotonopsis, Michx. (Crotonopsis.)

C. linearis, Michx. Near Manchester, O., and Southwark. (*Knieskern.*) Pines. (*Canby.*)

Order 98. EMPETRACEÆ. Crowberry Family.

Corema, Don. (Broom-Crowberry.)

C. Conradii, Torr. Borders of pine woods, O. and M.

Order 99. URTICACEÆ. Nettle Family.

Ulmus, L. (Elm.)

U. fulva, Michx. M., Mer., not rare ; frequent north.

U. Americana, L. River banks and low grounds.

Celtis, Tourn. (Nettle-tree—Hackberry.)

C. occidentalis, L. Banks of Tom's River, O., rare ; frequent in Bergen Co.)

Morus, Tourn. (Mulberry.)

M. rubra, L. Sparingly in middle and north.

M. alba, L. North. (Adv. Eu.)

Urtica, Tourn. (Nettle.)

U. gracilis, Ait. W. (*Knighton.*)

U. dioica, L. W. (*Knighton.*) Bergen Hill. (*T. C. B.*) (Nat. Eu.)

Laportea, Gaudichaud. (Wood-Nettle.)

L. Canadensis, Gaudichaud. Damp woods, common.

Pilea, Lindl. (Richweed—Clearweed.)

P. pumila, Gray. Common.

Bœhmeria, Jacq. (False Nettle.)

B. cylindrica, Willd. Common north.

Parietaria, Tourn. (Pellitory.)

P. Pennsylvanica, Muhl. Mer. (*Dr. Torrey.*) Tappan, and Sandy Hook. (*T. C. B.*)

Humulus, L. (Hop.) H. Lupulus L. Along streams, not common.

ORDER 100. **PLATANACEÆ.** PLANE-TREE FAMILY.

Platanus, L. (Plane-tree—Buttonwood.)

P. occidentalis, L. Banks of streams, common.

ORDER 101. **JUGLANDACEÆ.** WALNUT FAMILY.

Juglans, L. (Walnut.)

J. cinerea, L. Rich soil, banks of streams, rare in M., O., and Bur. Common in the hills near Princeton, and north.

J. nigra, L. About dwellings and in fields. Sus., Passaic. (*Austin.*)

Carya, Nutt. (Hickory.)

C. alba, Nutt. Common north.

C. microcarpa, Nutt. Closter. (*Austin.*)

C. tomentosa, Nutt. Rich woods, the common hickory; south.

C. porcina, Nutt. Woods, Mer. and Mid., frequent north.

C. amara, Nutt. Woods, frequent.

ORDER 102. **CUPULIFERÆ.** OAK FAMILY.

Quercus, L. (Oak.)

Q. alba L. Rich soil, very common and valuable for timber.

Q. obtusiloba, Michx. Sandy soil, frequent south.

Q. bicolor, Willd. Common north.

Q. Prinus, L. South. (*T. C. B.*)

Var. monticola, Michx. Hilly woods, common north.

Var. acuminata, Michx. Mer. and M.

Var. humilis, Marsh. Camden, pine woods. (*Canby.*) Budd's Lake. (*Porter.*)

Q. Phellos, L. (Willow Oak.) This tree is found in Mer. Mid., and

M., sparingly; common south. I think this is the northern limit of it. Dr. Torrey puts it down in the New York Flora as growing in Suffolk County, L. I. I have not seen any on the Island, and think if it was seen there it must have been in planted grounds.

Q. imbricaria, Michx. Woods, Mer. and Mid.

Q. nigra, L. Dry, sandy soil, common.

Q. heterophylla, Michx. South Jersey. (*Austin.*)

Q. ilicifolia, Wang. Pine barrens and mountain-tops, common.

Q. falcata, Michx. Point Pleasant, and low country, frequent.

Q. coccinea, Wang. Woods, common in M. and Mer., and north.

Var. tinctoria, Bartram. Dry hills, throughout.

Q. rubra, L. Woods, common.

Q. palustris, Du Roi. Wet grounds, common in the middle and north.

Castanea, Tourn. (Chestnut.)

C. vesca, L. Rich woods, middle and north.

Fagus, Tourn. (Beech.)

F. ferruginea, Ait. Banks of Squan and Shark rivers and in Upper Freehold, common north.

Corylus, Tourn. (Hazel-nut—Filbert.)

C. Americana, Walt. Thickets and river banks, common.

C. rostrata, Ait. Mer. (*Dr. Torrey.*) Phillipsburg. (*Porter.*) Mor. (*Austin.*)

Ostrya, Micheli. (Hop-Hornbeam—Iron-wood.)

O. Virginica, Willd. Along streams and the borders of damp woods, not rare.

Carpinus, L. (Hornbeam—Iron-wood.)

C. Americana, Michx. River banks, frequent.

Order 103. MYRICACEÆ. Sweet-Gale Family.

Myrica, L. (Bayberry—Wax-Myrtle.)

M. Gale, L. W. (*Knighton.*)

M. cerifera, L. Dry, light soils, frequent.

Comptonia, Solander. (Sweet-Fern.)

C. asplenifolia, Ait. Dry, sandy soils, very common.

Order 104. BETULACEÆ. Birch Family.

Betula, Tourn. (Birch.)

B. lenta, L. Damp woods, common north.

B. lutea, Mx. f. Frequent north. (*Austin.*)
B. alba, Spach.
Var. populifolia, common.
B. nigra, L. River banks, common north.
B. pumila, L. Budd's Lake. (*Porter.*)

Alnus, Tourn. (Alder.)

A. incana, Willd. Budd's Lake, Mor. (*Porter.*)
A. serrulata, Ait. River banks and swamps, common.

Order 105. SALICACEÆ. Willow Family.

Salix, Tourn. (Willow—Osier.)

S. candida, Willd. Budd's Lake. (*Porter.*)
S. tristis, Ait. Margins of swamps.
S. humilis, Marshall. Mer. and M. (*Dr. Torrey.*)
S. discolor, Muhl. W. (*Knighton.*)
S. sericea, Marshall. Bergen Point. (*T. C. B.*) Banks of the Delaware, Camden Co. (*Parker.*)
S. petiolaris, Smith. W. (*Knighton.*)
S. viminalis, L. W. (*Knighton.*) (Adv. Eu.)
S. cordata, Muhl. Mer. (*Dr. Torrey.*)
S. livida, Wahl.
Var. occidentalis, Gray. W. (*Porter.*)
S. longifolia, Muhl. W. (*Porter.*)
S. lucida, Muhl. Budd's Lake, Mor. (*Porter.*)
S. fragilis, L. Banks of Delaware, Camden Co. (*Parker.*)
S. alba, L. Marble Hill. (*Porter.*)
S. nigra, Marshall. Damp borders of streams, common.
S. myrtilloides, L. Budd's Lake, Mor. (*Porter.*)

Populus, Tourn. (Poplar—Aspen.)

P. tremuloides, Michx. Woods, not rare.
P. grandidentata, Michx. Common middle and north.
P. heterophylla, L. Palisades. (*T. C. B.*)
P. angulata, Ait. W. (*Porter.*)
P. balsamifera, L.
Var. candicans, Gray. (Balm of Gilead.) Not rare. (Adv. Eu.)

Order 106. CONIFERÆ. Pine Family.

Pinus, Tourn. (Pine.)

P. rigida, Miller. Both dry and wet soils. The most common species of this genus.
P. inops, Ait. Sandy soils, M., O., and Bur.
P. mitis, Michx. Dry, sandy soils, common south.
P. Strobus, L. M. and north.

Abies, Tourn. (Spruce—Fir.)

A. nigra, Poir. Hunterdon. (*Knighton.*) Bergen Co. (*T. C. B.*) Budd's Lake. (*Porter.*) Mountains, north. (*Austin.*)

A. Canadensis, Michx. Shady borders of swamps, north.

Larix, Tourn. (Larch.)

L. Americana, Michx. North-eastern parts of the State; also Budd's Lake. (*Porter.*)

Thuja, Tourn. (Arbor Vitæ.)

T. occidentalis, L. W. (*Knighton.*) Closter. (*Austin.*)

Cupressus, Tourn. (Cypress.)

C. thyoides, L. Swamps, O., and south, common. Also in M. and Mer.; frequent north.

Juniperus, L. (Juniper.)

J. communis, L. M. and Mer., rare. (*Dr. Torrey.*) H. (*Knighton.*)

Var. Alpina, L.; or prostrata. Common on the Palisades. *Var.* erectum, found about Dickerson Junction, Mor., and Delaware Water Gap. (*Austin.*)

J. Virginiana, L. Fence-rows and along the coast, common throughout the State. Sports widely.

Taxus, Tourn.

T. baccata, L.

Var. Canadensis. Palisades and Rocky hills. (*Austin.*)

CLASS II. MONOCOTYLEDONOUS OR ENDOGENOUS PLANTS.

Order 107. ARACEÆ. Arum Family.

Arisæma, Martius. (Indian Turnip—Dragon-Arum.)

A. triphyllum, Torr. Shady ravines and swamps, rare in middle counties, common north.

A. Dracontium, Schott. Sussex Co. (*Austin.*)

Peltandra, Raf. (Arrow Arum.)

P. Virginica, Raf. Wet places and in water, middle and south.

Calla, L. (Water Arum.)

C. palustris, L. Budd's Lake, Mor. (*Porter.*) Sus. (*Austin.*)

Symplocarpus, Salisb. (Skunk Cabbage.)

S. fœtidus, Salisb. Wet places, common.

Orontium, L. (Golden-club.)

O. aquaticum, L. Swamps and in shallow streams, common.

Acorus, L. (Sweet Flag—Calamus.)

A. Calamus, L. Borders of swamps, common.

Order 108. LEMNACEÆ. Duckweed Family.

Lemna, L. (Duckweed—Duck's-meat.)

L. trisulca, L. Common north.
L. Torreyi, Austin. Closter, pools. (*Austin.*)
L. perpusilla, Torr. Common.
Var. trinervis, Aust. Camden. (*Austin.*) Pamrapo, Bergen Co. (*W. H. Leggett.*)
L. minor, L. Common.
Var. obscura, Austin. New Durham. (*T. C. B.*)
L. polyrrhiza, L. Common.

Wolffia, Horkel. Schleiden.

W. Columbiana, Karsten. Closter, rare; and Camden. (*Austin.*)

Order 109. TYPHACEÆ. Cat-tail Family.

Typha, Tourn. (Cat-tail Flag.)

T. latifolia, L. Deep swamps or ponds, common.
T. angustifolia, L. Borders of creeks near salt water.

Sparganium, Tourn. (Bur-reed.)

S. eurycarpum, Eng. Closter, common. (*Austin.*)
S. simplex, Hudson. Shallow streams and pools, common.

Order 110. NAIADACEÆ. Pondweed Family.

Naias, L. (Naiad.)

N. flexilis, Rostk. Sluggish brooks, middle and north-east.

Zannichellia, Micheli. (Horned Pondweed.)

Z. palustris, L. Sluggish waters, low country, not common.

Zostera, L. (Grass-wrack—Eel-grass.)

Z marina, L. Barnegat bay, Squan and Shark rivers.

Ruppia, L. (Ditch-grass.)

R. maritima, L. Tom's River, in four feet water, rare. (*Knieskern.*)

Potamogeton, Tourn. (Pondweed.)

P. natans, L. Shallow water, common.

P. Claytonii, Tuckerman. Gently flowing streams, common.

P. hybridus, Michx. Still waters, common.

P. pulcher, Tuckerman. Tom's River. (*Porter.*) Also Atlantic City. (*Canby.*)

P. amplifolius, Tuckerm. Andover. (*Porter.*)

P. gramineus, L. Hackensack River. (*Austin.*)

P. lucens, L. Upper part of M., not common. Hackensack River. (*T. C. B.*)

P. perfoliatus, L. M. and Mer. (*Dr. Torrey.*) Hackensack creeks. (*T. C. B.*)

P. crispus, L. Morris Co., common. Passaic. (*T. C. B.*)

P. compressus, L. Waters of the Hackensack. (*T. C. B.*)

P. pauciflorus, Pursh. Slow running streams, not rare.

P. pusillus, L. Sloughs of the Hackensack. (*Austin.*)

P. Tuckermani, Robbins. Atsion, Camden. (*Canby.*)

P. pectinatus, L. M. (*Dr. Torrey.*) Waters of the Hackensack. (*T. C. B.*)

P. Robbinsii, Oakes. Budd's Lake. (*Porter.*) Waters of the Hackensack. (*T. C. B.*)

Order 111. **ALISMACEÆ.** Water-Plantain Family.

Triglochin, L. (Arrow-grass.)

T. maritimum, L. Wet grounds, M., not common.

Scheuchzeria, L. (Scheuchzeria.)

S. palustris, L. Budd's Lake, Mor. (*Porter.*)

Alisma, L. (Water-Plantain.)

A. Plantago, L. Wet places, common.

Sagittaria, L. (Arrow-head.)

S. variabilis, Engelm. Wet places, ponds, etc., common. Leaves vary from 3 in. to ½ an inch in width.

S. calycina, Engl. English Neighborhood, or Fairview, Bergen Co. (*Austin.*)

S. pusilla, Nutt. Hackensack streams. (*Dr. Torrey.*) English Neighborhood. (*Austin.*) Passaic. (*W. H. Leggett.*) Muddy shores of Delaware River, Camden Co. (*Parker.*)

S. heterophylla, Pursh. Camden, wet places, frequent. (*Canby.*)

Order 112. **HYDROCHARIDACEÆ.** Frog's-bit Family.

Limnobium, Richard. (American Frog's-bit.)

L. Spongia, Richard. Swimming River, M., rare.

Anacharis, Richard. (Water-weed.)

A. Canadensis, Planchon. Sluggish streams, common.

Vallisneria, Micheli. (Tape-grass—Eel-grass.)

V. spiralis, L. Slow rivers, not rare.

ORDER 114. **ORCHIDACEÆ.** ORCHIS FAMILY.

Orchis, L. (Orchis.)

O. spectabilis, L. Sparingly throughout.

Habenaria, Willd., R. Br. (Rein-Orchis.)

H. tridentata, Hook. Cold, shady swamps, not rare, especially in the middle and north.

H. integra, Spreng. Wet places, not common.

H. virescens, Spreng. Chatham, Secaucus. (*T. C. B.*)

H. viridis, R. Br.

Var. bracteata, Reichenbach. Closter, rare. (*Austin.*)

H. Hookeri, Torr. Sussex Co. (*Austin.*)

H. orbiculata, Torr. Closter, very rare ; also near Sparta, Sussex Co. (*Austin.*)

H. cristata, R. Br. Atsion. (*Canby.*) South, rare.

H. ciliaris, R. Br. Wet meadows, sparingly throughout the State.

H. blephariglottis, Hook. Common in peat bogs.

H. lacera, R. Br. Frequent in swamps.

H. psycodes, Gray. Wet meadows.

H. fimbriata, R. Br. W. (*Knighton.*) Budd's Lake. (*Porter.*) Elizabeth. (*T. C. B.*)

H. peramœna, Gray. Damp, low grounds, Lawrenceville, M. (*Lanning.*)

Goodyera, R. Br. (Rattlesnake-Plantain.)

G. pubescens, R. Br. Rich woods, middle and north.

Spiranthes, Richard. (Ladies' Tresses.)

S. cernua, Richard. Wet meadows, not uncommon.

S. graminea, Lindl.

Var. Walteri. Summit. (*T. C. B.*) Closter, and Mor. (*Austin.*)

S. gracilis, Bigelow. Sandy plains, common.

S. simplex, Gray. Keyport. (*Brown.*) Closter, rare. (*Austin.*) Sandy soil near Camden. (*Parker.*)

Listera, R. Brown. (Twayblade.)

L. cordata, R. Brown. Mer. (*Dr. Torrey.*)

L. australis, Lindl. Camden. (*Canby.*)

L. convallarioides, Hook. Cedar swamps, New Durham. (*Dr. Torrey.*)

Arethusa, Gronov. (Arethusa.)

A. bulbosa, L. This beautiful plant is found sparingly in the swamps near Freehold. Budd's Lake. (*Porter.*) Closter. (*Austin.*) Frequent south.

Pogonia, Juss. (Pogonia.

P. ophioglossoides, Nutt. Bogs, common.

P. pendula, Lindl. Bergen Co., common. (*Austin.*)

P. divaricata, R. Br. Quaker Bridge. (*T. C. B.*, and *Prof. Eaton.*)

P. verticillata, Nutt. Rare. This plant flowers very sparingly; I discovered a locality, about half a mile east of Freehold, which contained from one to two hundred plants; and although I visited it throughout the season for several successive years, I never found but one specimen in flower. Common about Closter. (*Austin.*)

P. affinis, C. F. Austin. Closter, rare. (*Austin.*)

Calopogon, R. Br. (Calopogon.)

C. pulchellus, R. Br. Bogs, frequent, middle and north.

Tipularia, Nutt. (Crane-fly Orchis.)

T. discolor, Nutt. Dry woods, near Freehold, rare.

Microstylis, Nutt. (Adder's-Mouth.)

M. ophioglossoides, Nutt. Mer. (*Dr. Torrey.*) East and north. (*T. C. B.*)

Liparis, Richard. (Twayblade.)

L. liliifolia, Richard. Near Manchester, O., east and north, rare. (*T. C. B.*)

L. Lœselii, Richard. W. (*Porter.*) Closter, rare. (*T. C. B.*)

Corallorhiza, Haller. (Coral-root.)

C. odontorhiza, Nutt. Damp woods.

C. multiflora, Nutt. Damp woods.

Aplectrum, Nutt.

A. hyemale, Nutt. Closter, rare. (*Austin.*)

Cypripedium, L. (Lady's Slipper—Moccasin-flower.)

C. parviflorum, Salisb. W. (*Knighton.*)

C. pubescens, Willd. Damp thickets, middle and north.

C. spectabile, Swartz. Wet places. Freehold, not common, and north-east. (*Austin.*)

C. acaule, Ait. Damp sandy woods, common.

ORDER 115. **AMARYLLIDACEÆ.** AMARYLLIS FAMILY.

Hypoxys, L. (Star-grass.)

H. erecta, L. Dry woods and fields, common.

ORDER 116. **HÆMODORACEÆ.** BLOODWORT FAMILY

Lachnanthes, L. (Red-root.)

L. tinctoria, Ell. Low country.

Lophiola, Ker. (Lophiola.)

L. aurea, Ker. Sandy swamps, low country, not rare.

Aletris, L. (Colic-root—Star-grass.)

A. farinosa, L. Edges of damp grassy woods, middle, common.
A. aurea, Walt. About Freehold, and south.

ORDER 118. **IRIDACEÆ.** IRIS FAMILY.

Iris, L. (Flower-de-Luce.)

I. versicolor, L. Wet places, common.
I. Virginica, L. Marshes near the coast, not very common.

Sisyrinchium, L. (Blue-eyed Grass.)

S. Bermudiana, L. Damp grassy places, common.

ORDER 119. **DIOSCOREACEÆ.** YAM FAMILY.

Dioscorea, Plumier. (Yam.)

D. villosa, L. Swamps, not rare.

ORDER 120. **SMILACEÆ.** SMILAX FAMILY.

Smilax, Tourn. (Greenbrier—Catbrier.)

S. Walteri, Pursh. Camden. (*Canby.*) Cape May. (*Austin.*)
S. rotundifolia, L. Woods and damp thickets, common.
Var. quadrangularis, Gray.
S. glauca, Walt. Common.
S. tamnoides, L. Thickets. (*Dr. Gray.*)
S. hispida, Muhl. Hunterdon and W. (*Knighton.*)
S. Pseudo-China, L. Old sandy fields, common.
S. laurifolia, L. Pine woods of South Monmouth, and low country.
S. herbacea, L. Damp grounds, common.
S. tamnifolia, Michx. Open fields, low country, not rare.

ORDER 121. **LILIACEÆ.** LILY FAMILY.

Trillium, L. (Three-leaved Nightshade.)

T. erectum, L. Damp woods, north.

T. cernuum, L. Moist woods, throughout.

T. erythrocarpum, Michx. New Durham. (*Dr. Torrey* and *T. C. B.*)

Medeola, Gronov. (Indian Cucumber-root.)

M. Virginica, L. Rich, shady woods, middle and north.

Melanthium, Gronov., L. (Melanthium.)

M. Virginicum, L. Damp meadows, rather rare.

Mr. C. F. Austin reports a form found in the northern parts of the State with broader leaves and other characters which are sufficiently constant to give it the rank of a variety.

Zygadenus, Michx. (Zygadene.)

Z. leimanthoides, Gray. Wet meadows, rather rare, low country.

Veratrum, Tourn. (False Hellebore.)

V. viride, Ait. Low grounds, common middle and north.

Amianthium, Gray. (Fly-Poison.)

A. muscætoxicum, Gray. Mer. (*Dr. Torrey.*) Low country.

Xerophyllum, Michx. (Xerophyllum.)

X. asphodeloides, Nutt. Pine barrens, more common in O.

Helonias, L. (Helonias.)

H. bullata, L. Swamps near Freehold, and south, among the pines

Chamælirium, Willd. (Devil's-Bit.)

C. luteum, Gray. Sparingly throughout.

Tofieldia, Hudson. (False Asphodel.)

T. pubens, Ait. Near Manchester, in a swamp, rare, O.

Uvularia, L. (Bellwort.)

U. perfoliata, L. Damp grounds, common.

U. sessilifolia, L. Damp, shady places, not rare.

Smilacina, Desf. (False Solomon's Seal.)

S. racemosa, Desf. Shady copses, frequent.

S. stellata, Desf. Borders of meadows along brooks, Freehold, dry limestone rocks, Sus. (*Austin.*) And Snake Hill. (*T. C. B.*)

S. trifolia, Desf. Shady places, very rare. Blue Mountains. (*Austin.*)

S. bifolia, Ker. Damp, open woods, common.

Polygonatum, Tourn. (Solomon's Seal.)

P. biflorum, Ell. Along fences and waste places, middle and north, not rare.

P. giganteum, Dietrich. Rich soil, banks of streams, common.

Asparagus, L. (Asparagus.)

A. officinalis, L. Waste places along the coast near sandy shores. (Adv. Eu.)

Lilium, L. (Lily.

L. Philadelphicum, L. Open copses, not rare.

L. Canadense, L. Moist bogs and meadows, rather common.

L. superbum, L. Rich, low meadows, low country ; sparingly in the north.

Erythronium, L. (Dog's-tooth Violet.)

E. Americanum, Smith. Damp banks, along brooks, not rare.

E. albidum, Nutt. Oxford, H. (*Knighton.*) M. (*Lockwood.*)

Ornithogalum, Tourn. (Star-of-Bethlehem.)

O. umbellatum, L. Damp meadows, middle and north. (Nat. Eu.)

Allium, L. (Onion—Garlic.)

A. tricoccum, Ait. Closter, common. (*T. C. B.*)

A. cernuum, Roth. Rocky banks.

A. vineale, L. Common in pastures and old fields. (Nat. Eu.)

A. Canadense, Kalm. Passaic Falls and Palisades. (*T. C. B.*)

Hemerocallis, L. (Day-Lily.)

H. fulva, L. Cultivated or waste places, near dwellings, escaped. (Adv. Eu.)

Narthecium, Mœhring. (Bog-Asphodel.)

N. ossifragum, Huds.

Var. Americanum. Pine barrens and swamps, frequent. (*Canby.*)

Order 122. **JUNCACEÆ.** Rush Family.

Luzula, DC. (Wood-rush.)

L. pilosa, Willd. Pascack. (*T. C. B.*)

L. campestris, DC. Dry fields and woods, rather common in the middle.

Juncus, L. (Rush—Bog-rush.)

J. effusus, L. Wet meadows, common.

J. Rœmerianus, Scheele. Brackish marshes. (*Gray.*) Very rare.

J. marginatus, Rostkovius. Low grounds, common.

J. bufonius, L. Road-sides in wet places, common.
J. Gerardi, Loisel. Cape May, common. (*Austin.*)
J. tenuis, Willd. Low grounds, common.
Var. secundus, Eng. W. (*Porter.*)
J. dichotomus, Ell. South Jersey. (*Canby.*)
J. pelocarpus, E. Meyer. Low country. (*Porter.*)
Var. subtilis, Eng. Mor. (*Porter.*)
J. articulatus, L.
Var. obtusatus, Gray. Petty's Island, Camden Co. (*Parker.*)
J. militaris, Bigel. O., common.
J. acuminatus, Michx. Bergen Point. (*T. C. B.*)
Var. debilis. South Jersey. (*Canby.*)
Var. legitimus. South Jersey. (*Canby.*)
J. nodosus, L. Wet and swampy ground, M. (*Dr. Torrey.*) Gravelly hill-sides, W. (*Knighton.*)
J. scirpoides, Lam. Wet borders of streams, not rare.
Var. macrostemon, Engelm. O. (*Austin.*)
J. Canadensis, J. Gay.
Var. longicaudatus, Eng. South Jersey. (*Canby.*)
Var. subcaudatus, Engelm. (*Eng.*)
J. coarctatus, Eng. Budd's Lake. (*Porter.*)
J. asper, Engelm. South Jersey. (*Canby.*) Very rare.

ORDER 123. **PONTEDERIACEÆ.** PICKEREL-WEED FAMILY.

Pontederia, L. (Pickerel-weed.)
P. cordata, L. Shallow water, common.

Heteranthera, Ruiz and Pav. (Mud-Plantain.)
H. reniformis, Ruiz and Pav. Muddy places, M., and North. (*T. C. B.*)

Schollera, Schreber. (Water Star-grass.)
S. graminea, Willd. Slow streams, middle and north.

ORDER 124. **COMMELYNACEÆ.** SPIDERWORT FAMILY.

Tradescantia, L. (Spiderwort.)
T. Virginica, L. Waste places, O., not common. (*Knieskern.*)

ORDER 125. **XYRIDACEÆ.** YELLOW-EYED GRASS FAMILY.

Xyris, L. (Yellow-eyed Grass.) Boggy pastures.
X. flexuosa, Muhl. South Jersey, boggy pastures. (*Canby.*) Closter. (*T. C. B.*)
X. torta, Smith. South Jersey. (*Canby.*)
X. Caroliniana, Walt. Wet sandy places, frequent south.
X. fimbriata, Ell. Pine barrens near Manchester, O., and south, rare.

ORDER 126. **ERIOCAULONACEÆ.** PIPEWORT FAMILY.

Eriocaulon, L. (Pipewort.)

E. decangulare, L. Pine barren swamps, and streams. (*Canby.*)

E. gnaphalodes, Michx. South Jersey. (*Canby.*)

E. septangulare, Withering. Edges of ponds, not rare.

ORDER 127. **CYPERACEÆ.** SEDGE FAMILY.

Cyperus, L. (Galingale.)

C. flavescens, L. Low grounds, near Good-Luck Point, O., and near the coast, very rare. (*Knieskern.*)

C. diandrus, Torr. Low grounds, common, especially near the coast.

Var. castaneus, Torr. With the former, common.

C. Nuttallii, Torr. Common near salt or brackish water.

C. erythrorhizos, Muhl. Petty's Island, Camden Co. (*Parker.*)

C. inflexus, Muhl. Petty's Island, Camden Co. (*Parker.*) Also Closter. (*T. C. B.*)

C. compressus, L. Petty's Island, Camden Co. (*Parker.*) (Adv. South.)

C. dentatus, Torr. Sandy swamps, common near the coast.

C. rotundus, L.

Var. Hydra, Gray. Along the Delaware River, Camden Co. (*Parker.*) (Adv. Eu.)

C. phymatodes, Muhl. Low country, common.

C. strigosus, L. Low and rich grounds, common.

C. Michauxianus, Schultes. Closter. (*T. C. B.*) Manchester. (*Knieskern.*)

C. Grayii, Torr. Barren, sandy soil, near the coast.

C. filiculmis, Vahl. Barren, sandy soils, not rare.

C. ovularis, Torr. Sandy fields and road-sides, frequent in middle.

C. retrofractus, Torr. Old fields, south.

Dulichium, Richard. (Dulichium.)

D. spathaceum, Pers. Borders of ponds and swamps.

Fuirena, Rottböll. (Umbrella-Grass.)

F. squarrosa, Michx. Salt marshes, Tom's River, O., rare. Pines of South Jersey. (*Canby.*)

Var. pumila, Torr. Near Shark River, M., rare.

Lipocarpha, R. Br.

L. maculata, Torr. Petty's Island. (*Parker.*) (Adv. South.)

Eleocharis, R. Br. (Spike-Rush.)

E. Robbinsii, Oakes. M. and Quaker Bridge. (*Canby.*)

E. quadrangulata, R. Br. Dennisville. (*Porter.*) Ponds, Cape May. (*Parker.*)

E. tuberculosa, R. Br. Wet, sandy places, not far from the sea-coast, common.

E. obtusa, Schultes. Muddy places, not common.

E. olivacea, Torr. Wet, sandy places, common.

E. palustris, R. Br. Common throughout.

Var. calva, Gray. Hackensack swamps. (*T. C. B.*)

E. rostellata, Torr. Ponds, Cape May; also Atlantic City. (*Parker* and *Dr. Allen.*) Hackensack meadows. (*T. C. B.*)

E. intermedia, Schultes. Wet banks and in swamps, M. and O.

E. microcarpa, Torr. Pine forests, M. and O.

E. tenuis, Schultes. Swamps and wet places, common.

E. melanocarpa, Torr. Sandy swamps, M. and south.

E. tricostata, Torr. Near Quaker Bridge and Webb's old field, the northern limit of this plant, rare, O. (*Knieskern* and *Canby.*)

E. acicularis, R. Br. Muddy borders of ponds, common.

E. pygmæa, Torr. Edges of salt meadows, M. and O. Closter and Weehawken. (*T. C. B.*)

Scirpus, L. (Bulrush or Club-Rush.)

S. planifolius, Muhl. Palisades, dry rocky woods, common. (*Austin.*)

S. subterminalis, Torr. Slow running streams, and ponds, south.

S. pungens, Vahl. Borders of salt and fresh water, common.

S. Olneyi, Gray. Salt marshes, Tom's River, O., and near Squan Village, M., rare.

S. validus, Vahl. Fresh-water ponds, common.

S. debilis, Pursh. Swamps, M. and Mer. (*Dr. Torrey.*) Closter and Morristown. (*T. C. B.*)

S. Smithii, Gray. Camden. (*Canby.*)

S. maritimus, L. Salt meadows, common.

S. polyphyllus, Vahl. Along rivulets, Palisades, common. (*Austin.*)

S. lineatus, Mx. Closter, Palisades, and Bergen Point. (*T. C. B.*)

S. Eriophorum, Michx. Wet meadows and swamps, common.

Var. laxus, Gray. Bergen Point. (*T. C. B.*)

Eriophorum, L. (Cotton-Grass.)

E. Virginicum, L. Bogs and wet places, common.

E. polystachyon, L. Peat-bogs, common south.

E. gracile, Koch. Mor. (*Porter.*)

Var. paucinervium, Engelm. New Durham swamp. (*T. C. B.*)

Fimbristylis, Vahl.

F. spadicea, Vahl. Salt marshes, common.

Var. castanea, Gray. North-east. (*T. C. B.*)

F. autumnalis, Rœm. and Schult. Low grounds, common.

F. capillaris, Gray. Dry, barren, and sandy fields, common.

F. congesta, Torr. Camden. (*C. F. Parker.*) Ballast heaps. (Adv.)

Dichromena, Richard. (Dichromena.)

D. leucocephala, Michx. Wet places among the pine forests, M. and O.

Rhynchospora, Vahl. (Beak-Rush.)

R. cymosa, Nutt. Damp grounds near Newberry Pond, on Commodore Stockton's farm, Squan, M., rare. (*Knieskern.*) In W. (*Knighton.*) Also near Hightstown.

R. Torreyana, Gray. Damp grounds and road-sides, O., rare.

R. fusca, Rœm. and Schultes. Bogs, common.

R. gracilenta, Gray. Low, sandy swamps, common.

R. pallida, M. A. Curtis. Atsion. (*Canby.*)

R. alba, Vahl. Cranberry bogs, common.

R. Knieskernii, Carey. Paint-Hollow, on bog-iron-ore beds, two miles from Manchester, O., near Cassville, rare. (*Knieskern.*)

R. glomerata, Vahl. Low grounds, everywhere common.

R. cephalantha, Torr. Bogs near Manchester, O., very rare. (*Knieskern.*)

R. macrostachya, Torr. Beaverdam, and Manchester, rare. South Jersey. (*Canby.*)

Cladium, P. Browne. (Twig-Rush.)

C. mariscoides, Torr. Bogs, common near the coast.

Scleria, L. (Nut-Rush.)

S. triglomerata, Michx. Low and rather dry soils, common.

S. laxa, Torr. Pines, common. (*T. C. B.*)

S. verticillata, Muhl. Hackensack. (*Allen.*)

S. laxa, Torr. Paint-Hollow, near Manchester, O.

S. pauciflora, Muhl. Near Shark River, M. Dry upland, rare.

Carex, L. (Sedge.)

C. polytrichoides, Muhl. Common throughout.

C. Willdenovii, Schk. On the Delaware, Hunterdon. (*Porter.*)

C. bromoides, Schk. Common north.

C. disticha, Huds. Sussex. (*Garber.*)

C. teretiuscula, Good. Budd's Lake, Mor. (*Porter.*)

C. vulpinoidea, Michx. Low meadows, common.

C. stipata, Muhl. Swamps and wet meadows, common.

C. sparganioides, Muhl. Common.

C. cephalophora, Muhl. Meadow woods near Squan Village, M., rare.

C. Muhlenbergii, Schk. Dry, sandy fields, rare.

C. rosea, Schk. Woods, common.

C. retroflexa, Muhl. Woods near Squan Village, M., rare; frequent on the Palisades. (*Austin.*)

C. tenella, Schk. Budd's Lake, Mor. (*Porter.*)

C. trisperma, Dewey. Shady swamps near Manchester, and north, rare.

C. canescens, L. Marshes and wet meadows, common.

Var. vitilis, Gray. Buddstown, Bur. (*Canby.*) Common north.

C. exilis, Dewey. Low swamps, Manchester and Burrsville, O. Near Shark River, M. Abundant in some localities. Also Absecum. (*Canby.*)

C. sterilis, Willd. Wet places, common.

C. stellulata, L. Wet meadows and marshes, common.

Var. scirpoides, in similar localities, common.

Var. angustata, Gray. Marshes, common.

C. scoparia, Schk. Low meadows and swamps, very common.

C. lagopodioides, Schw. Common.

C. cristata, Schk. Common north.

C. albo-lutescens, Schw. C. adusta, Boott. (*Porter.*)

C. fœnea, Willd. Wet places, common near the coast.

Var. sabulonum, Boott. Atlantic City. (*Canby.*)

C. straminea, Schk. Dry fields and along fences, rather rare.

Var. moniliformis, Tuckerman. Occurs on the coast, common.

C. alata, Torr. Atlantic City. (*Canby.*)

C. stricta, Lam. Swamps and wet meadows, common. This is the C acuta of Muhlenberg, and American authors.

C. salina, Wahl. On the banks of a branch of Tom's River, two miles north-east of Manchester, O., where it is abundant. This species is included with some hesitation, but it compares very well with my specimens of this plant from Sweden. (*Knieskern.*)

C. crinita, Lam. Wet meadows and streams, a variable species, common.

C. Barrattii, Schw. and Torr. Borders of swamps and marshes, common about Manchester, O., but rare elsewhere; a variable but very fine species.

C. irrigua, Smith. Budd's Lake. (*Porter.*)

C. livida, Willd. Occurs in abundance and perfection in swamps about Manchester, O., a fine species.

C. tetanica, Schk. Sussex. (*Garber.*)

C. granularis, Muhl. (*Austin.*)

C. pallescens, L. Meadows, New Egypt, O., common north.

C. conoidea, Schk. W. and Mor. (*Porter.*)

C. grisea, Wahl. (C. laxiflora, Schk.) Common.

Var. mutica, Carey. Near Hornerstown, O., on upland.

C. gracillima, Schw. (*Porter.*) Common north-east.

C. virescens, Muhl. Meadows, pastures, and woods, common.

C. triceps, Michx. Damp meadows, not very common.

C. Smithii, Porter. Below Camden. (*Porter.*)

C. platyphylla, Carey. W. (*Porter.*)

C. retrocurva, Dew. Closter, common. (*Austin.*)

C. digitalis, Willd. Damp soil, O., and north.

C. laxiflora, Lam.

Var. striatula, Carey. Damp, shady places, common.

Var. patulifolia, Dewey. Shady places. A very variable species as to size and form of leaves, etc.

Var. styloflexa, Boott.

C. oligocarpa, Schk. Closter, common. (*Austin.*)

C. pedunculata, Muhl. (*Austin.*)

C. eburnea, Boott. Lime-stone rocks, Sus. (*Austin.*)

C. umbellata, Schk. Dry, sandy fields, common south.

C. Emmonsii, Dew. South, a fine species. (*Canby.*) Closter. (*Austin.*)

C. Pennsylvanica, Lam. Dry, open barrens and hills, common.

C. varia, Muhl. (*Austin.*)

C. pubescens, Muhl. (*Austin.*)

C. miliacea, Muhl. Common.

C. scabrata, Schw. War., common. (*Porter.*) Common on the Palisades. (*Austin.*)

C. arctata, Boott. (*Austin.*)

C. glabra, Boott. Pines, South Jersey. (*Canby.*)

C. debilis, Michx. Wet meadows and springy hill-sides, common.

C. flava, L. Sussex, rare. (*Garber.*)

C. filiformis, L. Closter and north. (*Austin.*)

C. lanuginosa, Michx. Wet meadows.

C. vestita, Willd. Slightly damp fields and open woods, rare.

C. polymorpha, Muhl. (C. Halseyana, Dewey.) Borders of swamps, rare.

C. striata, Michx. Wet places, common south.

C. riparia, Curtis. Andover. (*Porter.*) Common at Closter. (*Austin.*)

C. comosa, Boott. Andover. (*Porter.*) Closter. (*Austin.*)

C. Pseudo-Cyperus, L. (*Austin.*)

C. hystricina, Willd. Wet places, quite common.

C. tentaculata, Muhl. Wet meadows, common. W., dry soils. (*Knighton.*)

C. intumescens, Rudge. Swamps and wet meadows, common.

C. Grayi, Carey. (*Austin.*)

C. lupulina, Muhl. South Jersey. (*Canby.*) Frequent.

C. lupuliformis, Sartwell. (*Austin.*)

C. folliculata, L. Swamps and wet meadows, common.

C. subulata, Michx. Cedar swamps and borders of small streams, quite common.

C. squarrosa, L. Closter. (*Austin.*)

C. Schweinitzii, Dew. (*Dr. Gray* and *Austin.*)

C. utriculata, Boott. Camden. (*Porter.*)

C. monile, Tuckerman. (*Austin.*)

C. bullata, Schk. Wet meadows and swamps, not rare.

ORDER 128. **GRAMINEÆ.** GRASS FAMILY.

Leersia, Solander. (White Grass.)

L. Virginica, Willd. Damp, shady places, not common.
L. oryzoides, Swartz. (Rice Cut-Grass.) Wet places, common.

Zizania, Gronov. (Water or Indian Rice.)

Z. aquatica, L. (Indian Rice—Water Oats.) Near salt water, common.

Alopecurus, L. (Foxtail Grass.)

A. aristulatus, Michx. Mer. (*Dr. Torrey.*) Closter. (*Austin.*)

Phleum, L. (Cat's-tail Grass.)

P. pratense, L. (Timothy.) Meadows, cultivated. (Nat. Eu.)

Vilfa, Adans, Beauv. (Rush-Grass.)

V. aspera, Beauv. Frequent at Closter. (*Austin.*)
V. vaginæflora, Torr. Frequent at Closter. (*Austin.*)

Sporobolus, R. Br. (Drop-seed Grass.)

S. compressus, Kunth. M. (*Dr. Torrey.*) South Jersey. (*Canby.*)
S. serotinus, Gray. Swamps, common. (*Knieskern.*) South Jersey. (*Canby.*)

Agrostis, L. (Bent-Grass.)

A. elata, Trin. South Jersey. (*Canby.*)
A. perennans, Tuckerman. M. (*Dr. Torrey.*)
A. scabra, Willd. Common.
A. canina, L. Near Andover. (*Porter.*)
A. vulgaris, With. (Red-top.) Used for hay and pasture.
A. alba, L. (White Bent-Grass.) Damp places, rare.

Cinna, L. (Wood Reed-Grass.)

C. arundinacea, L. Shady places, rare.
Var. pendula, Gray. South Jersey. (*Canby.*)

Muhlenbergia, Schreber. (Drop-seed.)

M. sobolifera, Trin. Open woods, Freehold.
M. glomerata, Trin. Swampy places, Freehold and north.
M. Mexicana, Trin. Shady places, rare.
M. sylvatica, Torr. and Gray. Shady places, along fences, rare.
M. Willdenovii, Trin. Shady places, not common.
M. diffusa, Schreber. Shady places, not common.
M. capillaris, Kunth. Sandy soils, south, very rare. (*Canby.*)

Brachyelytrum, Beauv.

B. aristatum, Beauv. Shady banks, near Shark River, common north.

Calamagrostis, Adans. (Reed Bent-Grass.)

C. Canadensis, Beauv. Low meadows, near Squan and Shark rivers, common, M.

C. confinis, Nutt. Swamps, Mer., not common.

C. Nuttalliana, Steud. Damp and shady places, rare. South Jersey. (*Canby.*) Frequent at Closter. (*Austin.*)

C. brevipilis, Gray. Moderately damp places. Low country, rare.

C. arenaria, Roth. Sandy beaches and sand-hills. Useful in binding drifting sands together, common.

Stipa, L. (Feather-Grass.)

S. avenacea, L. (Black Oat-Grass.) Dry, sandy or gravelly, open woods, common, low country.

Aristida, L. (Triple-awned Grass.)

A. dichotoma, Michx. Dry, sandy fields and road-sides, common.

A. gracilis, Ell. Dry, sandy woods and road-sides, common.

A. purpurascens, Poir. Sandy fields and road-sides, not rare.

A. tuberculosa, Nutt. Sandy soils, Middletown, M., rare.

Spartina, Schreber. (Cord or Marsh Grass.)

S. polystachya, Willd., Muhl. (Salt Reed-Grass.) Salt or brackish marshes, within tide-water, common.

S. juncea, Willd. Damp, sandy beaches and salt marshes, common. (*Knieskern.*) Cape May. (*Canby.*)

S. stricta, Roth.

Var. glabra. Salt marshes, common.

Var. alterniflora. Cape May. (*Canby.*)

Gymnopogon, Beauv. (Naked-beard Grass.)

G. racemosus, Beauv. Sandy woods and pines of M. and O. Also South Jersey. (*Canby.*)

Eleusine, Gærtn. (Crab-Grass—Yard-Grass.)

E. Indica, Gærtn. A troublesome weed in cultivated grounds, common. (Nat. India.)

Leptochloa, Beauv.

L. fascicularis, Gray. Edges of salt meadows, M. and O.

Tricuspis, Beauv.

T. seslerioides, Torr. Dry, shady places, rare.

T. purpurea, Gray. Dry, white sand, not common, low country.

Dactylis, L. (Orchard Grass.)

D. glomerata, L. Cultivated. (Nat. Eu.)

Eatonia, Raf.

E. obtusata, Gray. Not common.

E. Pennsylvanica, Gray. Damp, wooded places, common.

Glyceria, R. Br., Trin. (Manna-Grass.)

G. Canadensis, Trin. Bogs and wet places, not common.

G. obtusa, Trin. Wet meadows and swamps, rather common.

G. elongata, Trin. Budd's Lake. (*Porter.*)

G. nervata, Trin. Wet meadows, common.

G. pallida, Trin. Sluggish, shallow streams, not rare.

G. aquatica, Smith. Wet grounds, common.

G. fluitans, R. Br. Wet places, not common.

G. acutiflora, Torr. Waterford, Burlington Co. (*Parker.*)

Brizopyrum, Link. (Spike-Grass.)

B. spicatum, Hook. Salt meadows, common, O. and M. Also Cape May. (*Canby.*)

Poa, L. (Meadow-Grass—Spear-Grass.)

P. annua, L. Door-yards. Common.

P. compressa, L. Dry fields, frequent.

P. serotina, Ehrhart. Damp meadows along brooks, common.

P. pratensis, L. Used for hay and pasture, common.

P. trivialis, L. Damp meadows, M.

P. alsodes, Gray. (P. nemoralis, Torr.) Borders of woods, not common. (*Knieskern.*)

Eragrostis, Beauv. (Eragrostis.)

E. reptans, Nees. Camden. (*Parker.*)

E. pœoides, Beauv.

Var. megastachya, Gray. Waste places, gardens, O., rare. (*Knieskern.*) (Nat. Eu.)

E. pilosa, Beauv. Barren, sandy fields, not rare. (Nat. Eu.)

E. Frankii, Meyer. W. (*Porter.*)

E. Purshii, Schrader. W. (*Porter.*)

E. capillaris, Nees. Dry, sandy fields, not common. W. (*Porter.*)

E. pectinacea, Gray. Chatham. (*Leggett.*) Along the Delaware. (*Porter.*)

Festuca, L. (Fescue-Grass.)

F. Myurus, L. Atsion. (*Canby.*) South. (Nat. Eu.)

F. tenella, Willd. Dry, sandy soil, not very rare.

F. ovina, Gray. (*Var.* duriuscula, Gray.) Throughout.

F. elatior, L. Damp meadows, not rare. (Nat. Eu.)

F. nutans, Willd. Meadows, O., and north. (*Knieskern.*)

Bromus, L. (Brome-Grass.)

B. secalinus, L. (Chess.) Too common in wheat-fields. There is a

popular idea, still prevailing, that wheat will change into chess, but there is nothing in observation or experiment to justify such a belief.

B. racemosus, L. Grain-fields, W. (*Knighton.*)

B. Kalmii, Gray. Shady woods and river banks, not rare.

B. ciliatus, L. Warren. (*Parker.*)

B. sterillis, L. Passaic. (*Austin.*) (Nat. Eu.)

Uniola, L. (Spike-Grass.)

U. gracilis, Michx. Borders of woods and thickets, common, O. (*Knieskern.*) South Jersey. (*Canby.*)

Phragmites, Trin. (Reed.)

P. communis, Trin. Good-Luck meadows, O.; also Hackensack meadows.

Lolium, L. (Darnel.)

L. perenne, L. Meadows, not common. (Nat. Eu.)

Triticum, L. (Wheat.)

T. repens, L. Along fences, not common in middle counties. Reported as a troublesome weed in the north-west. (*Knighton.*)

Elymus, L. (Lyme-Grass—Wild Rye.)

E. Virginicus, L. Banks of small streams, rare.

E. Canadensis, L. Banks of Shark River, rare.

E. striatus, Willd. Banks of streams, rare.

Gymnostichum, Schreb.

G. Hystrix, Schreb. Palisades. (*Austin.*) Water Gap. (*Parker.*) Weehawken. (*T. C. B.*)

Danthonia, DC. (Wild Oat-Grass.)

D. spicata, Beauv. Dry barrens, very common.

D. sericea, Nutt. Frequent south.

Avena, L.

A. striata, Mx. Rocky woods. Palisades. (*Austin.*)

Trisetum, Persoon.

T. palustre, Torr. W. (*Porter.*) Closter. (*Austin.*)

Aira, L. (Hair-Grass.)

A. flexuosa, L. Dry hill-sides, not common.

A. cæspitosa, L. Damp places, rare.

A. præcox, L. Sandy fields. (*Dr. Gray.*) Camden. (*Redfield.*)

A. caryophyllea, L. Road-sides, near Salem. (*Canby.*) (Nat. Eu.)

Arrhenatherum, Beauv. (Oat-Grass.)

A. avenaceum, Beauv. Meadows, Shark River, M. (Nat. Eu.)

Holcus, L. (Meadow Soft-Grass.)

H. lanatus, L. (Velvet-Grass.) Meadows, not rare. (Nat. Eu.)

Hierochloa, Gmelin. (Holy-Grass.)

H. borealis, Roem. and Schultes. Border of salt marshes, near Squan Village, M., very rare, O. (*Knieskern.*) Salem. (*Canby.*) Frequent north.

Anthoxanthum, L. (Sweet Vernal-Grass.)

A. odoratum, L. Meadows, common. (Nat. Eu.)

Phalaris, L. (Canary-Grass.)

P. Canariensis, L. Closter. (*Austin.*)

P. arundinacea, L. Wet places, common.

Amphicarpum, Kunth.

A. Purshii, Kunth. Wet, sandy places, south.

Paspalum, L. (Paspalum.)

P. setaceum, Michx. Dry, sandy fields, common.

P. læve, Michx. Damp meadows, not common.

Panicum, L. (Panic-Grass.)

P. filiforme, L. Dry, sandy soils and road-sides, common.

P. glabrum, Gaudin. Waste places, common. (Nat. Eu.)

P. sanguinale, L. Both waste and cultivated fields, common. (Nat. Eu.)

P. anceps, Michx. Wet, sandy soils, pine barrens, O., common.

P. agrostoides, Spreng. Wet meadows, common, M.

P. proliferum, Lam. Edges of salt marshes.

P. capillare, L. Cultivated fields, rich soils, common.

P. virgatum, L. Dry and moist, sandy and gravelly soils, not rare.

P. amarum, Ell. Cape May. (*Canby.*)

P. latifolium, L. Thickets and river banks, common.

P. clandestinum, L. Shady places, common.

P. viscidum, Ell. South Jersey. (*Porter.*)

P. pauciflorum, Ell. Banks of the Delaware. (*Porter.*)

P. dichotomum, L. Dry and damp soils, woods and fields, a very variable species everywhere, common.

P. depauperatum, Muhl. Hill-sides, common.

P. verrucosum, Muhl. Sandy swamps, near the coast, rare.

P. Crus-galli, L. (Barnyard-Grass.) Rich, cultivated fields, and along streams. (Nat. Eu.)

Var. hispidum, Gray. Near salt water, usually of a brown color and with long awns, common.

Setaria, Beauv. (Bristly Fox-tail Grass.)

S. verticillata, Beauv. Cultivated fields, not common. (Adv. Eu.)
S. glauca, Beauv. Fields and yards, not common. (Adv. Eu.)
S. viridis, Beauv. Fields, rare. (Adv. Eu.)

Cenchrus, L. (Hedgehog or Bur-Grass.)

C. tribuloides, L. Sandy soils, too common.

Erianthus, Michx. (Woolly Beard-Grass.)

E. alopecuroides, Ell. Pines in South Jersey. (*Canby.*)

Andropogon, L. (Beard-Grass.)

A. furcatus, Muhl. Dry and damp soil, rare.
A. scoparius, Michx. Sandy soils and barren plains, common.
A. Virginicus, L. Sandy soils, common.
A. macrourus, Michx. Low grounds, frequent south.

Sorghum, Pars. (Broom Corn.)

S. nutans, Gray. Dry soils, frequent.

SERIES II.

CRYPTOGAMOUS OR FLOWERLESS PLANTS.

CLASS III. ACROGENS.

ORDER 129. **EQUISETACEÆ.** HORSETAIL FAMILY.

Equisetum, L. (Horsetail—Scouring Rush.)

E. arvense, L. Damp places, common.
E. pratense, Ehrh. Shaded grassy banks of rivulets, near Closter and Sparta. (*Austin.*)
E. sylvaticum, L. Budd's Lake. (*Porter.*) Closter. (*Austin.*)
E. limosum, L. About Freehold, and north.
E. hyemale, L. (Scouring Rush.) Wet banks, common.

ORDER 130. **FILICES.** FERNS.

Polypodium, L. (Polypody.)

P. vulgare, L. Rocks, common.

Adiantum, L. (Maidenhair.)

A. pedatum, L. Woods, common.

Pteris, L. (Brake or Bracken.)

P. aquilina, L. (Common Brake.) Pine barrens and woods, common.

Cheilanthes, Swartz. (Lip-Fern.)

C. vestita, Swartz. Lambertville. (*Canby.*) Milford. (*Porter.*) Palisades and Snake Hill.

Pellæa, Link.

P. gracilis, Hook. Growing on moist limestone rocks, Wortendyke, rare. (*Austin.*)

P. atropurpurea, Link. Dry limestone rocks about the zinc mines, Sussex. (*Austin.*)

Woodwardia, Smith. (Chain-Fern.)

W. Virginica, Smith. Swamps, common.

W. angustifolia, Smith. Borders of swamps, common.

Asplenium, L. (Spleenwort.)

A. Trichomanes, L. Rocks, common.

A. ebeneum, Ait. Rocky woods.

A. montanum, Willd. Delaware Water Gap. (*S. W. Knipe.*)

A. Ruta-muraria, L. Limestone cliffs, Sussex. (*Austin.*)

A. thelypteroides, Michx. Damp woods, Freehold, and north.

A. Filix-fœmina, Bernh. Damp woods, Freehold, and north.

Camptosorus, Link. (Walking-leaf.)

C. rhizophyllus, Link. North.

Phegopteris, Fee.

P. hexagonoptera, Fee. Closter, common. (*Austin.*)

Aspidium, Swartz. (Shield-Fern—Wood-Fern.)

A. Thelypteris, Swartz. Wet grounds, Freehold and Mer., and north.

A. Noveboracense, Swartz. Moist thickets, common. North.

A. spinulosum, Swartz. Common.

A. cristatum, Swartz. Red Bank. (*Guilford.*) North. (*Austin.*)

Var. Clintonianum. (*Gray.*)

A. Goldianum, Hook. W. (*Porter.*)

A. marginale, Swartz. M. (*Dr. Torrey.*) North. (*Austin.*)

A. acrostichoides, Swartz. Hill-sides and shady ravines, common.

Var. incisum. Bergen Co., rare. (*Woolston.*)

Cystopteris, Bernh. (Bladder-Fern.)

C. bulbifera, Bernh. Shady valleys, Freehold and north, on lime-stone.

C. fragilis, Bernh. Shaded hill-sides, Freehold, and moist rocks north.

Onoclea, L. (Sensitive Fern.)

O. sensibilis, L. Damp or wet places, common.

Woodsia, R. Brown. (Woodsia.)

W. obtusa, Torr. War. (*Porter.*) Palisades. (*Austin.*)

W. Ilvensis, R. Brown. W. (*Porter.*) Palisades. (*Austin.*)

Dicksonia, L'Her. (Dicksonia.)

D. punctilobula, Kunze. Damp woods, common.

Schizæa, Smith. (Schizæa.)

S. pusilla, Pursh. Low grounds, Tom's River, and near Kettle Creek, O., very rare. (*Knieskern.*) And Quaker Bridge, Batsto. (*Canby.*) Farago. (*Austin.*)

This little plant is so diminutive, that it is no doubt frequently overlooked by collectors.

Lygodium, Swartz. (Climbing Fern.)

L. palmatum, Swartz. This plant grows sparingly in damp, springy places in Mer. and M. In Mer. near Hightstown, on land belonging to Mr. John Ward; also near Shark River, in M. Rancocus. (*Canby.*) Near Matawan. (*Lockwood.*) Hackensack meadows. (*T. C. B.*)

Osmunda, L. (Flowering Fern.)

O. regalis, L. Common.

Var. spectabilis, Gray. Swamps, common.

O. Claytoniana, L. Borders of damp meadows, Freehold and Hightstown, and north.

O. cinnamomea, L. Damp woods, common.

Botrychium, Swartz. (Moonwort.)

B. lanceolatum, Angstrœm. Mor. and Ber. (*Austin.*)

B. Virginicum, Swartz. Shady woods, common north.

B. lunarioides, Swartz. Shady thickets, rare, M.

Var. obliquum, Gray. Closter. (*Austin* and *Woolston.*)

Var. dissectum, Gray. Closter. (*Austin* and *Woolston.*) Red Bank. (*Guilford.*)

Ophioglossum, L. (Adder's-Tongue.)

O. vulgatum, L. M. (*Dr. Torrey.*) Closter. (*Austin.*)

Order 131. **LYCOPODIACEÆ.** Club-Moss Family.

Lycopodium, L., Spring. (Club-Moss.)

L. lucidulum, Michx. Wet, shady places, north.

L. inundatum, L. Wet, sterile grounds.

L. alopecuroides, L. Damp fields and swamps, low country, common.

L. dendroideum, Michx. Shady woods, frequent north.

L. clavatum, L. Damp woods, common north.

L. Carolinianum, L. Borders of sandy swamps, common on the coast.
L. complanatum, L. Damp, open woods, neglected fields, common.
Var. Sabinæfolium. Norwood. (*Austin.*)

Selaginella, Beauv., Spring.

S. rupestris, Spring. Rocks near Closter, and mountains north. (*Austin.*)
S. apus, Spring. Damp, shady places.

Isoetes, L. (Quillwort.)

I. echinospora, Durieu. Budd's Lake. (*Porter.*)
Var. Braunii. Tom's River, O. (*Porter.*)
I. Engelmanni, Braun. Closter. (*Austin.*)

CATALOGUE OF MARINE ALGÆ.

Collected on the coast of Egg Harbor, at and near Beesley's Point, in Cape May County,

By Samuel Ashmead, Esq.,

and published in the Geological Report of Cape May County.

Series 1. **MELANOSPERMEÆ.**

Fucus, L.

F. vesiculosus, L. Very common between tide marks, on the shores of the Bays and the thoroughfares; not unfrequently attached to sods by a root penetrating several inches into the soil, throwing off numerous lateral shoots, having the appearance of undeveloped fronds, forming a strong hold-fast, and affording an interesting illustration of the modification of a discoid root, where local circumstances are unfavorable to such expansions. It is, however, more frequently found adhering by a conical disc to mussels (*Modiola plicatula*), which, at high water, unable to resist the buoyancy of the full-grown plant with its inflated vesicles, is, by degrees, wrested from its place of growth and cast upon the shore to perish, whence the *Fucus*, together with other marine plants, is carried away by the inhabitants for manure.

Stilophora, J. Ag.

S. rhizodes, J. Ag. Rather rare; on old shells, etc., near low-water mark. The few specimens which I obtained are fertile, of vigorous growth, and densely covered with wart-like fructification.

Ectocarpus, Lyngb.

E. littoralis, Lyngb. Very abundant in the Bays, on various submerged substances. Also fringing the steep banks of the thoroughfares between tide marks. Disappearing in July.

E. siliculosus, Lyngb. Occurs sparingly on the shores of Little Bay, on *Fucus vesiculosus.*

E. viridis, Harv. Common in the Bays, on *Zostera marina*, etc. Disappearing in July.

Series 2. RHODOSPERMEÆ.

Chondria, Ag.

C. dasyphylla, Ag. Plentiful in Little Bay, and on Bond's Bar, growing in large tufts on the sandy mud, to which it is attached by a fibrous root.

C. Baileyana, Mont. Common with the above.

Polysiphonia, Harv.

P. Olneyi, Harv. Rare, on *Zostera marina* in Little Bay.

P. Harveyi, Bailey. Very abundant in the Bays, and on Bond's Bar; on *Zostera marina.*

P. variegata, Ag. Very common, on *Zostera marina*, also attached to the mud by a fibrous root.

P. nigrescens, Grev. I collected fine specimens of this most valuable plant, in fruit, in the month of May. It occurs in great abundance in Little Bay, attached to the bottom by a fibrous root.

Champia, Harv.

C. parvula, Harv. Plentiful in Little Bay, on *Zostera marina.*

Grinellia, Harv.

G. Americana, Harv. Of this beautiful plant I found only one perfect specimen. It was growing in the Great Egg Harbor Bay near the shore, attached to the bottom by a somewhat fibrous root.

Gracilaria, J. Ag.

G. multipartita, J. Ag. Plentiful, particularly fine on planted oysters in Little Bay.

Solleria, J. Ag.

S. chordalis, J. Ag. Very common on all the shores. There can be no doubt but this bushy plant will grow and flourish in the coves of Little Bay, and other sheltered situations, without a foothold; for I have rarely found it attached to the bottom.

Chylocladia, Harv.

C. Baileyana, Harv. Frequent, on *Zostera marina*, *Ulva latissima*, etc.

Spyridida, Harv.

S. filamentosa, Harv. Particularly abundant and vigorous in the Bays; where, sheltered from the winds and waves, like the *Solieria chordalis*, it will luxuriate without the slightest attachment to the bottom.

Ceramium, Ag.

C. rubrum, Ag. This plant, in all its perplexing varieties, is found on *Zostera marina*, rather abundantly.

C. diaphanum, Roth. Occurs sparingly associated with the above.

C. fastigiatum, Harv. In dense tufts, on *Zostera marina*, rather rare.

Callithamnion, Arn.

C. byssoideum, Arn. Frequent on *Zostera marina*, also attached to old shells in Great Egg Harbor Bay.

C. polyspernum, Ag. Rare, on old shells in Great Egg Harbor Bay

Gelidum, Grev.

G. corneum, *var. γ. pinnatum*, Grev. I obtained two or three specimens of this plant in Little Bay, on old shells, near low-water mark.

Series 3. CHLOROSPERMEÆ.

Bryopsis, Ag.

B. plumosa, Ag. Not common; attached to old shells and other submerged substances on the shore of Great Egg Harbor Bay.

Cladophora, Harv.

C. falcata, Harv. Occurs plentiful in Little Bay.

Enteromorpha, Grev.

E. compressa, Grev. Very common everywhere; infesting the small pebbles on Great Egg Harbor Bay.

E. intestinalis, Link. Abundant in Little Bay, and on Bond's Bar. Frequently found floating in large quantities in the Bays.

Ulva, L.

U. latissima, L. Common with the above.

Porphyra, Ag.

P. vulgaris, Ag. Very rare. I have obtained but two or three specimens of this Alga, on *Zostera marina* in Little Bay.

INDEX

TO GENERA AND TO POPULAR NAMES.

LEARNED botanists do not *need* an index to a Catalogue of Plants. The author, however, hopes this book will be useful to *beginners*, and that naturalists whose specialty is not BOTANY will find it a convenient work of reference; with these objects in view, it is believed that an index to the generic and common names will greatly enlarge its usefulness.

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